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Specifications for public buildings.

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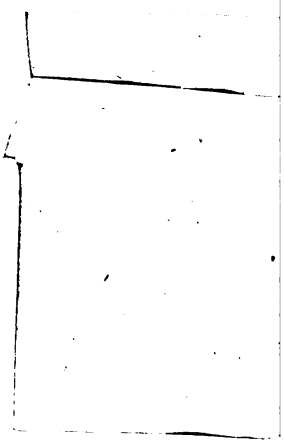

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SPECIFICATIONS

FOR

REBUILDING THE CUSTOM-HOUSE

AT

PORTLAND, MAINE,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department
Washington, D. C.

WASHINGTON:
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1855.

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SPECIFICATIONS

FOR

REBUILDING THE CUSTOM-HOUSE AT PORTLAND, MAINE,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for rebuilding the custom-house, at Portland, Maine, including accommodations for a post office, and United States court room, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury for that purpose) according to the following enumerated drawings, consisting of plans, elevations, sections, and working drawings, designed and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may hereafter from time to time be furnished therefrom.

DRAWINGS.

Drawings.

No 1. Plan of cellar, and first story.
2. Plan of second, and third stories.
3. Front, and rear elevations.
4. Side elevation, on Exchange street.
5. Longitudinal section.
5½. Transverse sections.
6. Details.
7. Do.
8. Do.
9. Do.
10. Do.
11. Do.
12. Do.

GENERAL DESCRIPTION OF THE WORKS.

Location on old foundations, &c.

The walls of the building, on the south side, and rear end, are intended to be over the old foundations, which must be made of proper width, and of sufficient strength to support what may come upon them, and if that cannot be done, they must be taken up and relaid; while the other walls and foundations are to be located in regard to that object,

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and be in conformity with the drawings, unless the nature of the ground upon which the foundations would rest should require a deviation from the above; in which case the superintendent will be authorized to make the required change. The heights in *all* cases to agree with the figured drawings.

Cellar window sky-lights.

On the north and south sides of the building there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the side-walk down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in the granite paving platforms which surround them, and be there properly secured.

Their covering.

Area walls.

The walls of the area will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the paving platforms in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of side-walk.

All the side-walks, and spaces, on the east, south, and north sides of the building, are to be paved with rough-hammered granite flagging, or paving platforms, resting on proper foundations, and making the proper curb-stone at the gutters of the streets, and at the cellar window sky-lights.

Cellar, its outside entrance.

The entrance to the cellar, for the purpose of storing goods, &c., will be by a granite stairway on the outside, at the rear or west end of the building, having suitable doors, *hoisting apparatus*, *&c.* A *brick* wall will divide the "water-closets," situated in the cellar, from that part of it used for storage, heating apparatus, &c.; and there will be separate stairways to *each*, constructed of *iron*.

Brick partition wall.

Iron stairway.

Foundation and walls.

Window and door jambs.

The foundations, and cellar walls will be laid in courses, with split granite faces, having straightened arrises, and hammered beds, and builds. The window, and door jambs, and heads in the cellar wall, will be rough-hammered, and rebated to receive the window frames and sashes, and the doors, or doors and frames, as may be found to be best.

Size of Stone.

The stones for the foundations should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

...paration of ...ations.

The beds to receive the foundations must be prepared so perfectly, that no settlement can possibly take place in any part of the works, and as a part of the building will rest

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immediately upon the ledge underlaying the site, while by following the drawings some parts would not go down to it, but would rest upon a more yielding substance, intervening between it and the ledge; in which case, should the intervening substance be of so yielding a nature as to endanger, in the least, the stability of the structure, it must be removed, and the foundations started from the ledge, or some other equally effective manner of construction must be resorted to, to secure the works from settlement.

Grading.

All the space formerly included in the cellar and areas of the former building, which come outside of the walls of the new building, must be graded up, with gravel or other proper earth, to the proper line to receive the granite flagging, and be well and thoroughly rammed down as it is put in.

Granite-work.

The entire exterior of the building will be faced with granite, including the door and window dressings, the *belt courses*, *cornice*, *&c.*, provided the bids for the same come within the means at the disposal of the department; if not, all the ornamental parts will be constructed of *cast iron*, and painted and sanded to imitate the granite of the building. The stone-work of the building is to be well and properly dressed, with good surfaces and arrises, the joints small and well pointed, the beds and builds full to the square and perfect, and the whole to be left clean and perfect on the completion of the building.

Iron ornaments contingent.

Roof.

The roof will be of corrugated galvanized iron, upon an iron frame, having proper eave gutters, scuttle, &c.

Outside doors, window frames, sash, &c.

The outside doors and the window frames and sash will be of iron, and the glass of the best quality of American crown glass.

Floors.

The floorings of the whole building are to be composed of small segmental arches of hard brick-work, turned from *wrought* iron beams resting upon the exterior walls and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank or boards. The columns resting upon granite piers in the cellar must extend up through the several stories, and support their floors and ceilings.

The thickness of the brick-work of the arches is to be the width of a brick. Proper scantling, furnished and put in by the carpenter with such aid as may be required from the bricklayer, must be laid and fastened on the brick-work, to receive the floor and nail it to; while at the proper time the brick-layer must fill in the haunches of the arches and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone or marble tile, the scantling will be left out.

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Ventilating flues.

A flue for ventilation is to be made from the upper part of each room throughout the building: they are to go up to the attic, and there be carried by wooden trunks to the chimney tops without smoke-flues, and through them to their tops, and are to have an Arnott's ventilating register to each flue.

Insert wooden blocks.

Wooden blocks are to be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar-floor.

The floor of the cellar is to be paved throughout with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside door-sills to all the cellar doors.

The entrance hall, and vestibule to the post office, in the first story, the vestibules and entrance to the custom-house and court-rooms, in the second story, and the vestibules and passages in the third and half stories, are to be paved with the best quality 2-inch marble or German tile, laid in diagonal courses with cement mortar, in tessellated manner, with colors, dark and light alternating.

Sewer.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, (agreeably to the municipal laws and regulations of the city of Portland,) through which the soil from the water-closets, &c., and the waste water from the premises can be discharged.

Drains.

Drains must be constructed, leading from the eave conductors, and soil pipes of the water-closets and sinks to the above sewer, and also from the cisterns in the yard, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations they must be constructed in connexion with them, and be fully secured against frost.

Interior hollow walls.

All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and do and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who are in all cases to do and perform all the work properly pertaining to their trades in said iron-work, the mason being responsible for its proper insertion and permanency in the building.

Half stories at rear end.

At the rear end the two upper stories are to be divided into half stories by inserting a flooring in each of them, which is only shown upon the longitudinal section, (No. 5.) The plans and finish of these half stories must be similar to the rooms immediately under them.

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The stairways to the building are to be of *wrought* and *cast* iron-work, with a mahogany hand-rail, in two flights, extending from the entrance story to the upper and upper half story. From the upper half story to the attic, and from that to the roof, there is to be constructed a flight of stairs three (3) feet wide, with small iron hand-rail, as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron hand-rail. Stairs.

There are to be fifteen (15) water-closets in the cellar, two (2) on the third story floor, and two others over them; all of which are to be furnished with proper and necessary spring seats, bowls, traps, urine-sinks, &c., complete; also with tanks or cisterns, capable of holding, on an average, two hundred (200) gallons of water, to each closet, placed immediately over them and receiving their supplies from the roof, or from the cisterns in the yard when the roof does not furnish the necessary quantities. All their main and supply pipes, &c., must be inserted in the brick-work as it goes up, and be fully secured against the action of the frost, and a channel left to receive the soil-pipe, which, when put in, must also be fully guarded and secured against the action of the frost. Water-closets.

The premises, belonging to the United States, west of the building must be enclosed with a substantial brick wall, eight (8) feet high, twelve (12) inches thick, having twelve (12) inch square buttresses projecting on the inside, and the whole surmounted by a proper, projecting, brick cornice and granite coping. The faces of the walls toward the streets must be faced pressed brick; and each wall must have a twelve (12) foot gateway in its centre, opening from the street, with a suitable close gate to each, properly hung, and secured with requisite bolts, locks, &c. The walls must have suitable foundations to sustain them, extending below the action of the frost. Brick enclosure. Granite coping. Gateways.

At the rear end, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the filtering apparatus, to convey the water to them; these pipes must be fully secured against the action of frost. Cast iron eave conductors inserted in outside walls to filtering apparatus.

A suitable branch must extend from the south west corner one to the cisterns of the water-closets in the cellar, and have a stop-cock and floating ball to control the supply of water. Branches to water-closet cisterns. Stop-cock and ball.

There must also be another water conductor, *three* (3) inches in diameter, from the eaves to the cisterns of the water-closets in the upper stories, for use in warm weather, with the necessary apparatus to close it during cold weather. Another conductor from eaves to water-closets.

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Eave pipes, elbows, &c.

The conductors should be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

Cisterns.

At suitable positions on the premises there must be sunk one or more cisterns, of brick-work in hydraulic cement mortar, and thoroughly plastered upon their inside with same kind of mortar, to receive the water from the roof, and to supply the building with water for all purposes. They must have attached to them proper, and suitable filtering apparatus to, fully, purify the water before it goes into the cisterns. Suitable iron pipes must be laid, below the frost, from the eave conductors to the filters, for conveying the water to them. The cisterns must be of the capacity of 40,000 gallons in the aggregate. They must be properly arched over so as to sustain the heaviest weights that may come upon them, and have a *man-hole* at the crown of the arch, covered with a suitable granite slab. The whole of the above premises must be paved with square rough granite paving blocks, upon a suitable found dation.

DIGGING, AND CARTING.

Trenches.

All the trenches are to be dug of the necessary size and depth to receive the foundations, as marked on the drawings, which must in all cases be so deep as to be beyond the action of the frost; and if the figures given are not of sufficient depth for that, they must be increased until they are, and their bottoms rammed down in the most solid manner with wooden rammers properly made and prepared for the purpose. If this does not give sufficient solidity to them, then they must be paved over their whole bottom surface with small paving stones in the most thorough manner, or otherwise fully secured against settlement.

Paved.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, are to be filled in with proper earth, and thoroughly rammed throughout; the inside is to be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed which is to be be laid on it, and on the exterior filled with proper earth up to the ground line given on the drawings.

Removing earth and rubbish.

All the surplus earth and material that may come out of the cellar, and trenches are to be deposited on the site and subsequently levelled, or carted away; and all the rubbish that may accumulate during the progress of the work is to be carted away, or deposited on the ground and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds are to be

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cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER'S, MASON'S, AND BRICKLAYER'S WORK.

Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement to be fresh burned, perfectly ground, securely put up, and kept dry until used; the sand of suitable size for the various purposes, clean and sharp gritted. The lime for the lime-mortar must be fresh and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well and properly mixed for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard burned, and laid in the most solid manner.

Granite. The granite must be of the best quality of eastern or Quincy granite; and all the granite-work of the arcade, door-ways, window dressings, and belt courses of the entrance story on the north, south, and east sides, must be hammered as fine as No. 2 hammering of the Boston custom-house, (being that of the exterior of the entrance story of the same, except what is within the two porticos) the rest of those three sides, and the belt courses, cornices, &c., of the rear end are to be as fine as the basement of the Boston custom-house.

Dressing.

Rear or west end. The ashlar of the rear or west end will be rough; the rustic-work of the basement, and that of the corners and around the windows of the second and third stories must have a chiselled edge, around them, one and a half ($1\frac{1}{2}$) inch wide, leaving the rest of their faces rough.

Manner of laying. All the granite-work must be laid, with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* is to be done when the work shall have become sufficiently dry to allow of its being properly performed.

Thickness of ashlar. Three-quarters of the ashlar of the first story must be fourteen (14) inches thick from its face, and the other quarter, as headers and binders, from eighteen (18) to twenty (20) inches thick. In the second story, the rustic corners are to be from thirteen (13) to seventeen (17) inches thick from their face; three-quarters of the remainder of the ashlar is to be ten (10) inches thick, and one-fourth, as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the third story, the rustic corners are to be from twelve (12) to sixteen (16) inches

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thick from their face; three-fourths of the remainder of the ashlar nine (9) inches, and the residue, as headers and binders, from thirteen (13) to seventeen (17) inches thick.

Doorway piers. The piers of the doorways are to be in three blocks, the *base* being one, the *shaft* another, and the *capital* the third.

Bed of stone for corner, &c. The stones composing the window, and door dressings, the *belt courses*, and cornice must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places.

Cramped and anchored. All the stone must be properly cramped, and anchored to one another, and also to the brick-work by cramps, furnished by the iron-worker. They are to be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing. All the stone-work is to be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two

Solid at bearings. bricks. Where heavy weights come on the exterior walls, the open space is to be made solid a sufficient distance around it to ensure proper stability to receive the weight imposed; and when a girder or beam rests on the wall,

Wall plates. a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Fireplaces. The fireplaces are to be made with fire-brick, and to have a marble mantel, to be worth $30 each, exclusive of their

Grates. setting; and, if required, coal grates, (worth $15 each exclusive of the setting,) with all the requisite fixtures, are to be furnished, and properly set in each fireplace. The

Hearths. hearths to be best quality fire-proof stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Furnaces. Two warm-air furnaces, are to be built in the cellar, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms: and, where necessary or required, they are to be carried up through the antæ and chimney, &c., as may be required. The whole to be finished complete, and put up in good working order, with all the hot-air registers,

Hot-air registers. &c. In the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 4 ditto 15 by 19 inches, and 3 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 6 ditto 11 by 15; and in the half story, 3 ditto 11 by 15 inches: all which are to be inserted in soap-stone frames. The walls throughout the entire work are to be carried up in regular horizontal courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

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The mason must give the amount he will deduct, provided the ornamental parts of the door and window dressings, the belt courses, and the cornice, are furnished of iron fitted to lay into the building; but he (the mason) putting it into its place, as before stipulated for all the iron work of the building. Also, the price per thousand for laying any extra brick-work required. Extra brick-work.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the building, do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

There will be in the entrance story two (2) square columns or antæ, in the second story, six (6), and six (6) in the third story, twelve (12) inches square, and three-quarters ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10) round columns, and in the second story six (6) ditto, twelve (12) inches diameter at their bases and ten (10) inches at their necks. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.) Antæ. Columns.

There will be furnished by the department, the following wrought iron *beams* and *girders*, viz: Beams and girders.

1	girder	20	feet long,	15	inches deep,
4	,,	17	,,	15	,,
24	,,	16	,,	15	,,
6	,,	14½	,,	15	,,
238	beams,	21	,,	(Shape of drawing.)	
119	,,	17	,,	,,	,,

They will be delivered upon a suitable wharf at Portland, by the department, and by the contractor, taken thence and put into the building.

The iron beams of the ceilings and floors are to be tied together with iron rods, as shown in the drawing No. 11, to sustain the full thrust of the segmental arches.

The window casings, and frames, and a part of the door casings must be of cast iron; the window frames are to be constructed for French casement sash, (which must be of iron,) with their proper hangings, fixtures, fastenings, &c., complete; the inside window shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, Window and door frames, &c.

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having suitable locks, knobs, bolts, &c., complete. (See drawing No. 10.)

To furnish all iron work. The iron-worker must furnish, to the mason, as he may need it for use, all the iron-workmentioned in the former part of these specifications as to be furnished by the iron-worker, and the mason or bricklayer must insert the same in the building as it progresses.

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs of wrought and cast iron, in two flights from the entrance to the third story, and one flight from the third to the half story above. From the end of the passage in this half story, he is to construct a flight of stairs, (not shown on the lithograph drawing plans,) 3 feet wide, to the attic floor, and from thence to the scuttle on the roof, by which it may be approached for any purpose. The steps and risers are to be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, to be put on by the carpenter. (See drawing No. 10.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized iron roof on a proper iron frame, with eave gutters, scuttle, &c., complete, moulded and fitted as per drawings; and put interior

Thresholds. thresholds to all the doors of cast iron.

Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and all other iron-work necessary to give permanency and stability to the building, of the best American iron, and as they may be wanted for use; and any delay from want of delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished. He must do

Jobbing. and perform all the blacksmith's and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

The iron-worker must give the price for furnishing, at the building, properly fitted to put into its place, and do what the specifications require of him; on the other part, all the ornamental parts of the door and window dressings, the belt courses, and the cornice of the exterior, provided it be necessary to construct the same of iron.

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CARPENTER'S AND JOINER'S WORK, AND LUMBER, ETC.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined. Lumber.

The joist, or scantling must be spruce pine; the floor boards $\frac{6}{4}$-inch heart southern pine, not more than 5 inches in width; the doors and other inside finishings, and window frames must be first quality, white or spruce pine; and the stair rails, and the newels and rails of the court room, best quality of mahogany for the purpose. Scantling. Finishings. Stair rails.

The floors of all the stories must be $\frac{6}{4}$ inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level to their tops. The scantlings to be not more than 16 inches apart from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, are to be furred and properly prepared for lathing and plastering. Floors.

The doors are to be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled, throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3, best, cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and are to have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$ inch thick. Doors.

The entrance story, to be used for the post office, must be fitted up with glazed windows and letter boxes between the iron antæ, with openings, &c., as per drawing No. 14, for delivery of letters, as the superintendent may direct. Post Office fittings.

The custom-house room must be fitted up with suitable counters and their appendages, of mahogany, proper for the business of the department. Finish of custom-house room.

The court room must be fitted with its railings, $2\frac{1}{4}$ by $3\frac{3}{4}$ inches, and newels 6 inches in diameter and of proper heights; its judge's seat, desk, &c.; its clerk's and marshal's seat, desk, &c.; its dock, witness stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat must be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectator seats must rise three inches, at least, to each seat as they retire from the bar. Finish of court room

There must be constructed fly doors to the court and custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete. Fly doors.

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Finish of water-closets.

He must construct all the wood-work and carpenter's work of the water-closets, &c., the seats of which are to be of mahogany, and the reservoirs, holding 100 gallons each over each of the water-closets, to receive the water from the roof or cisterns in the yard, for the use of the water-closets and other purposes, are to be made of 2-inch plank, milled, jointed, and matched, firmly and securely put together, and fully fitted to receive the lead lining to be put in by the plumber.

The mahogany stair rail will be 2¼ by 4 inches, wrought to pattern in best manner.

Centres.

Casing stone-work.

He must construct all the centres for the arches, trimmers, &c.; furnish and put on proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct and put up all the necessary ventilating trunks; to fully construct and complete all the other carpenter's and joiner's

Jobbing.

work on the building and do all the jobbing, &c., required of the carpenter and joiner, furnishing all the materials, and executing the whole work in a faithful and workmanlike manner, to the acceptance of the superintendent.

PLASTERING, STUCCO-WORK, ETC.

Ceilings.

Three coat work.

Two coats on the brick walls.

Granite finish.

All the ceilings are to be lathed, and plastered in three coats, and finished in stucco; all the brick walls are to be plastered with two coats, and, when required, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement and the condensation of moisture. All the rooms are to have a

Cornice or angle mouldings.

moulding in the angles at the ceiling as represented on the drawing No. 9, and the ceiling of the court room must be panelled as may be directed.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary

obbin g.

jobbing, is to be executed in the most workmanlike manner, to the acceptance of the superintendent.

PAINTING AND GLAZING.

Glazing.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the works.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, and finished in imitation of granite.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish. Inside iron-work

All the wood-work, except the floors and mahogany-work, usually painted in such buildings, is to be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods or marble, as may be directed by the superintendent. Grained work.

All the graining is to have two coats of best copal varnish, and the mahogany-work coats sufficient to give it proper body, and be polished in the best manner. Varnishing.

All the floors are to be oiled in the most thorough manner, and, if thought necessary, varnished with one coat. Oiling and varnishing floors.

The painter is to give the price he shall charge (in addition to his bid for the painting and glazing,) for painting, and sanding the ornamental parts of the door, and window dressings, the belt course, and the cornice, provided they have to be constructed of iron.

PLUMBER'S WORK.

The reservoirs, over the water-closets, are to be lined in the most perfect manner, with best eight-pound milled lead. Reservoirs.

In the cellar must be a *forcing* pump, of best kind and construction, for supplying the water-closet cisterns with water from the cistern in the yard; for which there must be laid the *main*, of suitable size, from the cistern in the yard, fully secured against frost, and from the pump to the water-closet cisterns, the proper supply pipes of suitable size. Force pump.

The plumber must construct (with the exception of their carpenter's work) the nineteen (19) water-closets mentioned in the former part of these specifications, and as shown on the plans, with all their fixtures complete, including supply, soil, and waste pipes, bowls, traps, basins, urine-sinks, with their supply and waste pipes, &c., &c. Water-closets.

The soil pipes are to be made of best eight-pound milled lead, and to lead into the drains; and all the other pipes are to be of the best and heaviest kind, and fully equal to the greatest pressure ever to be put upon them. The plumber to secure the whole apparatus from the frost, and be responsible for any defect in their operations; to furnish all the materials of the best quality, and to do and perform all the plumber's work, jobbing, &c., upon the building, to the satisfaction and acceptance of the superintendent.

GENERAL CONDITIONS.

All the work must be done in the best, and most workmanlike manner, of proper and appropriate material, ac- Manner of executing the work.

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cording to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been herein specified or not; and all such necessary work or materials, which may not have been set forth in these specifications, must be done and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described, and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the forementioned superintendent, and be subject to his entire approval; and in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor or contractors, and carried into effect without in any way violating or vitiating any contract which may have been made for work or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, as the case may be, before going into execution, or no allowance will be made for them by either party.

Omissions, additions, and alterations.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, December 28, 1854.

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SPECIFICATIONS

FOR THE

CUSTOM-HOUSE, POST OFFICE, COURT ROOMS,

AND

OTHER OFFICES OF THE UNITED STATES,

AT

RICHMOND, VIRGINIA.

Prepared at the Office of the Construction of Buildings, Treasury Department,
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1854.

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SPECIFICATIONS

FOR THE

CUSTOM-HOUSE, POST OFFICE. COURT ROOMS,

AND

OTHER OFFICES OF THE UNITED STATES.

Specifications of a building for custom-house, post office, court rooms, and other offices of the United States, at Richmond, Virginia, to be erected (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury for that purpose) according to the accompanying plans, elevations, sections, and working drawings, designed and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings and directions, in explanation thereof, as may hereafter from time to time be furnished therefrom.

The size of the building, its height, the heights of stories, thicknesses of floorings, pitch of roof, projections of the several parts, the thickness of walls, dimensions, divisions, and subdivisions, and the arrangement, &c., of the several stories, and details of the building, are to be the same as set forth and shown on the several drawings: all the measurements being in English feet and inches; and where not figured, are to be measured by the scale of the drawing as given thereon.

The foundation and cellar walls will be brought up with rubble stone masonry to a level proper to receive the first course of the stone-work—say three inches below ground line.

DRAWINGS.

Drawings.

No. 1. Plan of the first and second stories.
2. Plan of the cellar and upper stories.
3. Elevations on Maine street and on Bank street.
4. Flank elevation.
5. Longitudinal section.
6. Transverse section and details.
7. Details.
8. Do.
9. Do.
10. Do.
11. Do.
12. Do.
13. Do.
14. Do.

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DIGGING AND CARTING.

Trenches.

All the trenches are to be dug of the necessary size and depth to receive the foundations, as marked on the drawings, which must in all cases be so deep as to be beyond the action of the frost; and if the figures given are not of sufficient depth for that, they must be increased until they are, and their bottoms rammed down in the most solid manner with wooden rammers properly made and prepared for the purpose. If this does not give sufficient solidity to them, then they must be paved over their whole bottom surface with small paving stones, in the most thorough manner, or otherwise fully secured against settlement.

Paved.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, are to be filled in with proper earth, and thoroughly rammed throughout; on the inside brought up to within 8 inches of the paving of the cellar, to receive the concrete bed on which the same will be laid, and on the exterior to the ground line given on the drawings.

Removing earth and rubbish.

All the surplus earth and material that may come out of the cellar and trenches are to be deposited on the site and levelled, or carted away, as the superintendent may direct. All the rubbish that may accumulate during the progress of the work is to be carted away, or deposited on the ground and properly graded, as the superintendent may direct; and, on the completion of the work, all the streets and grounds are to be cleared up, and all the refuse materials carted away.

STONECUTTER'S, MASON'S, AND BRICKLAYER'S WORK.

Location.

The walls, foundations, &c., are to be located, in regard to the site and its several lines, in conformity to the figures on the drawings, unless the nature of the ground upon which the foundations rest requires some deviation, which will be under the direction of the superintendent and all the heights are to agree with the figured drawings.

Heights.

Foundations.

After the trenches are properly prepared, the course of foundations will be laid in with rubble stone masonry or square split granite cellar stone, in courses, with proper binders and headers in either case, laid in hydraulic cement and sand mortar, in the best manner, quite around the building, before the cellar walls are commenced, and the earth rammed in at its sides in a proper manner. When that is done, and the earth properly rammed at its sides, the cellar walls are to be commenced thereon and carried up to within three inches of the ground line the thickness marked on the drawings, with same stone masonry, in cement and sand mortar, as compose the foundations. At three inches below the ground line the cellar walls are to

Cellar walls.

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be finished with a course of Welch slate, propely overlapped and bedded, to prevent the ascent of moisture through the walls, and properly prepared to receive the brick and hammered stone-work. The brick piers are not to be constructed until the rubble stone masonry is completed. The foundations of the front steps can be put in to suit the convenience of the contractor.

Inside piers.

Foundations of front steps, &c.

The stones of the foundations should be of the largest superficial surface and proper thickness that can be obtained, fully flushed, and filled in the joints with mortar, solid throughout, and bonded together in the strongest manner.

The stones for the cellar walls are to be of the best size for the work, and laid and bonded in the most thorough manner, with well filled joints of mortar.

The mortar is to be composed of the best quality of hydraulic cement and coarse sharp-gritted sand of best quality, properly mixed and manipulated, as the superintendent may direct, and used in a proper state for the purpose.

Mortar.

The facing of the exterior walls of the building, the window and door dressings, the belt courses and cornice, the door steps, the outside door thresholds, window curbs, &c., are to be hammered granite, of the best quality to be found in the vicinity. The stone is to be wrought and laid in the most workmanlike manner. The ashler or granite-work up to the top of base course, which is seven inches below top of the floors of the entrance stories, will be 14 inches thick, with sufficient headers and binders from 18 to 20 inches thick, and backed up with hard-burned brick-work, with a space of two inches next to the inner course towards the cellar, which must be tied to the walls by headers the same as the walls above, as shown on drawing No. 14.

Facing of exterior walls.

The remainder of the ashler of the exterior of the building is to be, on entrance story, 12 inches thick, with headers, or binders from 16 to 20 inches; on second story, 10 inches thick, with headers or binders 14 to 18 inches; and on third story, 9 inches thick, with headers or binders 13 to 17 inches. The stones composing the window and door dressings, the belt course, cornice, &c., must be of sufficient bed and build to be readily retained in their places in the building in the most permanent manner. All the stone work is to be properly cramped and secured with iron cramps, &c., furnished by the iron-worker, and backed up with brick-work, in cement mortar, with a space of two inches next to the inner course towards the rooms, which must be tied to the walls by headers, as shown on drawing No. 14. Where there are heavy weights coming on the exterior walls, the open space is to be made solid a sufficient distance around it to insure a proper stability to receive the weight imposed.

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The lime mortar, in all cases, is to be composed of good

Lime mortar.

Cement mortar.

wood-burned lime and proper-sized, clean, sharp-gritted sand; the cement mortar, of the best quality of hydraulic cement and clean, sharp-gritted sand, of proper size and quality; the whole well and properly mixed and thoroughly manipulated, as may be directed by the superintendent, and used in its most perfect state for the purposes required.

Floors and ceilings.

The ceilings of the cellar and of the entrance and second stories, which form the floors of the entrance, second, and third stories, are to be composed of small segmental arches of hard brick-work, turned from wrought iron beams resting on wrought iron girders extending longitudinally through the building, and upon the exterior walls, as shown by drawing No. 11.

The thickness of the brick-work of the arches is to be the width of a brick. Proper scantling, furnished and put in by the carpenter, with such aid as may be required from the bricklayer, is laid and fastened on the brick-work to receive the floor and nail it to; while at the proper time the bricklayer is to fill in the haunches of the arches and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone or marble tile, the scantling will be left out.

Chimney flues.

The chimney flues are to be built as indicated on the plans, with a horizontal section equal to 175 square inches; they are to be plastered and pargetted on their inside throughout their whole length, and topped out with brick-work covered with cement, with cast iron mouldings, &c., or with cast iron entirely.

Ventilating flues.

A flue for ventilation to be made from the upper part of each room throughout the building, and going up to the attic and then carried by wooden trunks (furnished and put in by the carpenter) to the chimney tops without smoke flues, and through them to their tops; and are to have an Arnott's ventilating register to each flue.

Insert wooden blocks.

Wooden blocks (to be furnished by the carpenter) are to be walled in wherever required, to which to secure the jamb casings and other wood-work.

Fireplaces.

Grates.

Hearths.

The fireplaces are to be made with fire-brick, and each to have a marble mantel, to cost $30 each exclusive of their setting; and, if required, furnish and set a coal grate, and all its fixtures, in each fireplace, to cost $15 each exclusive of setting. The hearths to be best quality fire-proof stone for the purpose, twenty inches wide from the face of mantel and five feet six inches long.

Furnaces.

Two warm-air furnaces are to be built in the cellar, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues of proper and sufficient size leading to all the rooms;

and, where necessary or required, they are to be carried up through the antæ and chimney, &c., as per drawings. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 4 ditto 15 by 19 inches, and 3 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 6 ditto 11 by 15; and in the half story, 3 ditto 11 by 15 inches: all which are to be inserted in soapstone frames. Hot-air registers.

The entrance hall and vestibule to the post office, in the first story, the vestibules and entrance to the custom-house and court-rooms, in the second story, and the vestibules and and passages in the third and half stories, are to be paved with the best quality 2-inch marble or German tile, laid in cement mortar, in tesselated manner, with colors, dark and light alternating, in diagonal courses. Interior paving.

The floor of the cellar is to be paved throughout with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside door sills to all the cellar doors.

The stone-work of the building is to be well and properly dressed, with good surfaces and arrases, the joints small and well pointed, the beds and builds full to the square and perfect, and the whole to be left clean and perfect on the completion of the building. A sewer 18 inches diameter must be constructed from the premises, to some suitable point, (agreeably to the municipal laws and regulations of the city of Richmond,) through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged. Granite work.

Drains must be constructed, leading from the eave conductors and soil pipes of the water-closets and sinks to the above sewer, as may be directed by the superintendent. They are to be 10-inch interior diameter barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations, they must be constructed in connexion with them, and be fully secured against frost. Drains.

Eave conductors, of copper, 4 inches square, properly put up, are to extend from the eave gutter to the above drains. Eave conductors.

All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and do and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who are in all cases to do and perform all the work properly pertaining to their trades in said iron-work, the mason being responsible for its proper insertion and permanency in the building. Interior hollow walls.

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All the brick used in the building are to be of the best quality of the kind, large-sized, and hard-burned.

Jobbing. To do and perform all the jobbing pertaining to the brick, stone, and mason's work required in completing the building, or its appurtenances, without any extra charge for the same.

The mason to give the amount he will deduct provided the ornamental parts of the door and window dressings, the belt courses, and the cornice, are furnished of iron fitted to lay into the building; but he (the mason) putting it into its place, as before stipulated for all the iron-work of the building. Also, the price per thousand for laying any

Extra brick-work. extra brick-work required.

The contractors to furnish all the stone, brick, mortar, labor, stagings, and all other materials incident to the stone-work, mason's work, and bricklayer's work on the building; and do and perform all the work in the best manner, to the acceptance of the superintendent.

IRON-WORK.

Entrance story, antæ, &c. There will be in the entrance story, 4 antæ 12 by 12 inches and $\frac{3}{8}$ inch thick, with capitals, as shown by drawing No 11.

The iron beams of the ceilings and floors are tied together with iron rods, as shown in the drawing No. 11, to sustain the full thrust of the segmental arches.

Window and door frames, &c. The window casings and frames and a part of the door casings will be of cast iron; the window frames will be constructed for French casement sash, (which will be of iron,) with their proper hangings, fixtures, and fastenings, &c., complete; the inside window shutters will be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors will also be constructed of wrought iron, properly hung to the frames, having suitable locks, knobs, bolts, &c., complete. See drawing No. 13.

To furnish all iron work. To furnish to the mason as he may need for use all the iron-work mentioned in the former part of these specifications as to be furnished by the iron-worker, and by the mason or bricklayer inserted in the building as it progresses.

Antæ cast true. The antæ must be cast perfectly true and straight, or their surfaces planed or turned to make them so; all the bearing joints, antæ girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways. To furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs,

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of wrought and cast iron, in two flights, from the entrance to the third story, and one flight from the third to the half story above. From the northwest end of the passage in this half story, there is to be constructed a flight of stairs, (not shown on the lithograph drawing plans,) 3 feet wide, to the attic floor, and from thence to the scuttle on the roof, by which it may be approached for any purpose. The steps and risers are to be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, to be put on by the carpenter, (see drawing No. 13;) also to furnish and put up the iron balustrade over the Bank street entrance.

To construct and put up a galvanized iron roof on a proper iron frame, with eave gutters, scuttle, &c., complete, moulded and fitted as per drawings. Galvanized iron roof, gutters, &c.

Interior thresholds to all the doors of cast iron. Thresholds.

To furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and all other iron-work necessary to give permanency and stability to the building, of the best American iron, and as they may be wanted for use; and any delay from want of delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished. To do and perform all the blacksmith's and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent. Miscellaneous. Jobbing.

The iron-worker will give the price for furnishing at the building, properly fitted to put into its place, and do what the specifications require of him, the ornamental parts of the door and window dressings, the belt courses, and the cornice.

CARPENTER'S AND JOINER'S WORK, AND LUMBER, ETC.

All the lumber is to be of the very best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, and by kiln drying when necessary, and proper for the various purposes and uses for which it is destined. Lumber.

The joist or scantling to be spruce pine; the floor boards $\frac{6}{4}$-inch heart southern pine, not more than 5 inches in width; the doors and other inside finishings and window frames, first quality white or spruce pine; and the stair rails and the newels and rails of the court room best quality of mahogany for the purpose. Scantling. Finishings. Stair rails.

The floors of all the stories will be $\frac{6}{4}$ inch thick, milled, jointed and matched, not over 6 inches wide, laid on scantling, 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them being Floors.

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filled with cement concrete by the mason, same as the haunches of the arches, and brought up level to their tops. The scantlings to be not more than 16 inches apart from centre to centre, and the floors blind-nailed each board to each joist or scantling. All the ceilings and other parts of the building requiring it are to be furred and properly prepared for lathing and plastering.

Doors. The doors are to be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{1}{4}$-inch screws, and are to have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$ inch thick.

Post Office fittings. The entrance story, to be used for the post office, is to be fitted up with glazed windows and letter boxes between the iron antæ, with openings, &c., as per drawing No. 14, for delivery of letters, as the superintendent may direct.

Finish of custom-house room. The custom-house room must be fitted up with suitable counters and their appendages, of mahogany, proper for the business of the department.

Finish of court room. The court room must be fitted with its railings, $2\frac{1}{4}$ by $3\frac{3}{4}$ inches, and newels 6 inches in diameter and of proper heights, its judge's seat, desk, &c.; its clerk's and marshal's seat, desk, &c.; its dock, witness stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat will be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectator seats must rise three inches, at least, to each seat as they retire from the bar.

Fly doors. There must be constructed fly doors to the court and custom-house rooms the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

Finish of water-closets. To construct all the wood-work and carpenter's work of the water-closets, &c., the seats of which are to be of mahogany, and the reservoirs, holding 100 gallons each over each of the water-closets to receive the water from the city water-works for the use of the water-closets and other purposes, are to be made of 2-inch plank, milled, jointed, and matched, firmly and securely put together, and fully fitted to receive the lead lining to be put in by the plumber.

The mahogany stair rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

Centres. To construct all the centres for the arches, trimmers,

Casing stone-work. &c.; furnish and put on proper guards and casings to the cut stone-work, to insure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct and put up all the necessary ventilating trunks; to fully con-

struct and complete all the other carpenter's and joiner's work on the building, and do all the jobbing, &c., required of the carpenter and joiner, and furnish all the materials, and execute the whole work in a faithful and workmanlike manner, to the acceptance of the superintendent. Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings are to be lathed and plastered in three coats, and finished in stucco; all the brick walls are to be plastered with two coats and, when required, colored in imitation of granite, and left coarse finished with the float in the best manner, so as to prevent defacement and the condensation of moisture. All the rooms will have a moulding in the angles at the ceiling as represented on the drawing No. 11, and the ceiling of the court room panelled as may be directed. Three coat work. Ceilings. Two coats on the brick walls. Granite finish. Cornice or angle mouldings.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, is to be executed in the most workmanlike manner, to the acceptance of the superintendent. Jobbing.

PAINTING AND GLAZING.

All the glazing to be done with the best quality of American crown glass, well bedded back, puttied, and left clean and perfect on the completion of the works. Glazing.

The number of lights, sizes, &c., to be as indicated on the drawings.

All the exterior iron-work of the building is to be painted four coats of best quality New Jersey zinc paint, sanded in two coats, and finished in imitation of freestone. Exterior iron-work.

All the interior iron-work to have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish. Inside iron-work.

All the wood-work, except the floors and mahogany-work, usually painted in such buildings, is to be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods or marble, as may be directed by the superintendent. Grained work.

All the graining is to have two coats of best copal varnish, and the mohogany-work coats sufficient to give it proper body, and be polished in the best manner. Varnishing.

All the floors are to be oiled in the most thorough manner, and, if thought necessary, varnished with one coat. Oiling and varnishing floors.

GENERAL CONDITIONS.

All the work is to be done in the best and most workmanlike manner, of proper and appropriate material, according to the plans herein before cited and the foregoing Manner of executing the work.

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and comple execution of said plans is to be done and finished, whether the same may have been herein specified or not; and all such necessary work or materials, which may not have been set forth in these specifications, is to be done and are to be furnished in a manner corresponding with the rest of the work, as well and as faithfully as though the same were herein particularly described and provided for.

Work and material not sprcified.

Every part of the building is to be executed under the forementioned superintendent, and to be subject to his entire approval; and in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor or contractors, and carried into effect without in any way violating or vitiating any contract which may have been made for work or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from the contract, as the case may be, before going into execution, or no allowance will be made for them by either party.

To be done under superintendent.

Omissions, additions, and alterations.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, November 27, 1854.

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ERRATA

TO

RICHMOND CUSTOM-HOUSE SPECIFICATIONS.

On page 8. Instead of the first paragraph of three lines after "Iron work," read,

There will be four cast iron eave water conductors of 4-inch calibre, ½ inch thick, (for conducting the water from the roof to the drains,) with all the necessary eave pipes, turns, and elbows, to be put up in sections as the work progresses; the joints to be well and thoroughly calked with lead, and walled into the brick-work.

There will be 11 square columns, or antæ, in the entrance story; 6 ditto in the second story, and 8 ditto in the third story: all 12 inches square and ¾ of an inch thick. There will be 7 round columns in the first story, and 6 ditto in the second story, 12 inches diameter at their bases, 10 inches at their necks, and ¾ of an inch thick. All of them will have capitals and bases, as shown in the drawings.

There will be, of wrought iron,

8	girders,	18	feet	long,	and	16	inches	deep.			
40	"	15	feet	4	inches	long,	and	16	inches	deep.	
8	"	13	"	4	"	"	"	16	"	"	
256	beams,	19	"	6	"	"	shaped as per drawings.				
128	"	13	"	0	"	"	"	"	"		

These beams and girders will be furnished by the Department, on a suitable wharf, in Richmond, and from thence they will be taken by the contractor, and put into the building.

Insert after "Carpenters' work, &c.," on page 11:

PLUMBING.

The reservoirs over the water-closets are to be lined in the most perfect manner with best eight-pound milled sheet lead. Reservoir lining.

All supply, soil, and waste pipes, must be laid into the brick-work as it goes up, and made proof against frost; and also a "main," through the exterior wall.

To construct the water-closets as shown in the plans, with all their fixtures complete, including bowls, supply, soil, and waste pipes, traps, basins, urine sinks, with their waste and supply pipes, &c., &c. Water closets.

The soil pipes to be made of best milled eight-pound lead, leading in to the drains. Soil pipes.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AT

PROVIDENCE, RHODE ISLAND,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AT PROVIDENCE, R. I.,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for erecting a new custom-house, at Providence, R. I., including accommodations for a Post Office, and United States court room, which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No 1. Plan of piling foundations.
2. Cellar plan.
3. Entrance story plan.
4. Second story plan.
5. Third story plan.
6. Front, and rear end Elevations.
7. Side Elevations.
8. Longitudinal section.
9. Details of roof.
10. Details of exterior of entrance story.
11. Details of exterior window finish and cornice.
12. Do.
13. Do.
14. Do.

GENERAL DESCRIPTION OF THE WORKS.

Location. The building will be located, in reference to the surrounding streets, as designated in drawing No. 3.

Cellar-window sky-lights. On the two sides, and rear end of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the side-walk down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in the granite, paving platforms which surround them, and be there properly secured. Covering.

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Area walls. The walls of these areas will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the paving platforms in a proper manner. The bottoms of the

Paving of area. areas must be paved with brick, and each be provided with a small drain to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of side-walk. All the side-walks, and spaces, on the four sides of the building, must be paved with rough-hammered, granite, flagging, or paving platforms, resting on proper foundations, and making the proper curb-stone at the gutters of the streets, and at the cellar-window sky-lights.

Cellar, its outside entrance. The entrance to the cellar, for the purpose of storing goods, &c., will be by a granite stairway on the outside, at the rear end of the building, having suitable doors,

Brick partition wall. *hoisting apparatus, &c.* A *brick* wall will divide the "water-closets," situated in the cellar, from that part of it used for storage, heating apparatus, &c., and there must be separate stairways to *each*, constructed of *iron.*

Iron stairway.

Preparation of foundations. Coffer-dam boxing. A proper "coffer-dam" boxing must be extended entirely around the building, at a proper distance outside of the foundation, and made water tight.

Plug-valve. In this must be inserted a suitable, hollow, plug valve, to discharge surplus water into a drain, outside, leading to the common sewer.

Piling for foundations. The foundations of the building must be constructed as follows: Proper sized piles (now being received, and to be furnished to the contractor at cost,) must be driven to a suitable depth; their heads then cut off to the proper "water-level," as may be given, when the spaces between them, and four inches outside of the piles on each side of the foundations, must be filled in with the best proportioned hydraulic cement, and coarse sand, or gravel, con-

Concrete bed. crete to the depth of twelve (12) inches below the top of the piles, well, and thoroughly rammed, and made level with the heads of the piles throughout.

Foundations. Upon the above must be bedded, in hydraulic cement, and coarse, sand, mortar, a course of granite, eighteen (18) inches thick, with properly prepared beds, laid as stretchers, with not more than two widths making the whole width of the foundation, and of a size to cover, at least, six piles upon the average, and none less than three piles. Upon the above, another course of the same thickness, with properly prepared beds, laid as headers, each stone not less than two (2) feet wide, extending through the entire width of the course, and fully breaking joint with the first, must be laid, in the same kind of mortar as the first, and properly bedded upon it.

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Cellar walls.

The cellar walls must be constructed upon the above foundations, and laid in courses, with split granite faces, having straightened arrises, and hammered beds, and builds.

Window and door jams.

The window, and door jambs, and heads in the cellar wall, must be rough-hammered, and rebated to receive the window frames, and sashes, and the doors, or doors and frames, as may be found to be best.

Size of stone.

The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Grading.

All the space, outside of the walls of the building, must be graded up with gravel, or other proper earth, to the proper line to receive the granite flagging, and be well, and thoroughly rammed down as it is put in.

Granite-work.

The entire exterior of the building will be faced with granite, including the door and window dressings, (the window dressings, of the rear end, must be of the same design, and finish as those of the two sides, although shown differently upon the drawings,) the *belt courses*, *cornices*, *&c.* The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

Outside doors, window frames, sash, &c.

The outside doors, and the window frames, and sash, must be of iron, and glazed with the best quality of American crown glass.

Floors.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards.

Ceiling of upper story.

The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than five (5) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon granite piers in the cellar, must extend up through the several stories, and support their floors, and ceilings.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the

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arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

Ventilating flues. A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the and attic, thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue.

Insert wooden blocks. Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor. The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside door-sills to all the cellar doors.

The entrance hall, and vestibule to the post office, in the first story, the vestibules and entrance to the custom-house, and court-rooms, in the second story, and the vestibules, and passages in the third, and half stories, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Sewer. A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, (agreeably to the municipal laws, and regulations of the city of Providence,) and made tight, and secure, where it goes through the *boxing*, through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged.

rains. Drains must be constructed, leading from the eave conductors and soil pipes of the water-closets, and sinks to the above sewer, and also from the cisterns in the yard, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations be constructed in connexion with them, and fully fully secured against frost.

Interior hollow alls. All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do, and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

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Half stories at rear end.

The upper story, at the rear end, must be divided into two stories by the insertion of an intermediate flooring, shown only on the longitudinal section, (No. 8.) The plan, and finish of the upper rooms must be similar to those under them, as shown on drawing No. 5.

Stairs.

The stairways, to the building, must be of *wrought*, and *cast* iron-work, with a mahogany hand-rail, in two flights, extending from the entrance story to the upper, and upper half story. From the upper half story to the attic, and from that to the roof, there must be constructed a flight of stairs, three (3) feet wide, with small iron hand-rail, as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron hand-rail.

Water-closets.

There must be fourteen (14) water-closets in the cellar, two (2) on the third-story floor, and two others over them; all of which must be furnished with proper and necessary spring seats, bowls, traps, urine-sinks, &c., complete; also with tanks, and cisterns, capable of holding, on an average, two hundred (200) gallons of water, to each closet, placed immediately over them, and receiving their supplies from the roof, or from the well on the premises, when the roof does not furnish the necessary quanties. All their main and supply pipes, &c., must be inserted in the brick-work as it goes up, and be fully secured against the action of the frost, and a channel left to receive the soil pipe, which, when put in, must also be fully guarded and secured against the action of the frost.

Cast iron eave conductors inserted in outside walls to filtering apparatus.

At the rear end, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the filtering apparatus, to convey the water to them; these pipes must be fully secured against the action of frost.

Branches to water-closet cisterns. Stop-cock and ball.

A suitable branch must extend, from one of them, to the cisterns of the water-closets in the cellar, and have a stop-cock, and floating ball to control the supply of water.

Another conductor from eaves to water-closets.

There must also be another water conductor, *three* (3) inches in diameter, from the eaves to the cisterns of the water-closets in the upper stories, for use in warm weather, with the necessary apparatus to close it during cold weather.

Eave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

Artesian well.

At a suitable position on the premises there must be sunk, to a proper depth, an artesian well, that will, at all times, supply an abundance of pure, and wholesome water for all

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Supply pipes. Force pump.

the purposes required in the building, and on the premises. From this, proper supply pipes must be extended to all parts of the building, with a suitable, and approved forcing pump, of a sufficient power, and capacity to, properly, distribute the water, as above, placed, and secured in the most convenient location on the premises.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the boxing, foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent. All superfluous earth must be removed from the premises, and the whole made ready for the driving of the piles.

The spaces on each side of the fonndation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and, on the exterior, filled, with proper earth, up to the ground line given on the drawings.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets, and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER'S. MASON'S, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Granite.

The granite must be of the best quality of eastern or Quincy granite; and all the granite-work of the arcade,

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doorways, window dressings, and belt courses, of the entrance story, must be hammered as fine as No. 2 hammering of the Boston custom-house, (being that of the exterior of the entrance story of the same, except what is within the two porticos,) the rest of the building must be as fine as the basement of the Boston custom-house. Dressing.

All the granite-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed. Manner of laying.

Three-quarters of the ashlar of the first story must be fourteen (14) inches thick from its face, and the other quarter, as headers and binders, from eighteen (18) to twenty (20) inches thick. In the second story, the rustic corners must be from thirteen (13) to seventeen (17) inches thick from their face; three-quarters of the remainder of the ashlar must be ten (10) inches thick, and one-fourth, as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the third story, the rustic corners must be from twelve (12) to sixteen (16) inches thick from their face; three-fourths of the remainder of the ashlar nine (9) inches, and the resedue, as headers and binders, from thirteen (13) to seventeen (17) inches thick. Thickness of ashlar.

The piers, of the doorways, must be in three blocks, the *base* being one, the *shaft* another, and the *capital* the third. The stones, composing the window, and door dressings, the *belt courses*, and cornice, must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places. Doorway piers. Bed of stone for corner, &c.

All the stone must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason. Cramped and anchored.

All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. Backing.

Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them. Solid at bearings. Wall plates.

The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $30 each exclusive of their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, Fireplaces. Grates.

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Hearths. must be furnished, and properly set in each fireplace. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Heating apparatus. A suitable steam heating apparatus must be constructed in the cellar, with its boiler, engine, fan, and heating pipes, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ chimney, &c. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In

Hot-air registers. the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 4 ditto 15 by 19 inches, and 3 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 5 ditto 11 by 15; and in the half-story, 3 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Coal slides. Suitable coal-slides, to lead to the cellar, must be constructed in the sidewalks, as indicated on the plans.

The mason must give the amount he will deduct, provided the ornamental parts of the door and window dressings, the belt courses, and the cornice, are furnished of iron fitted to lay into the building; but he (the mason) putting it into its place, as before stipulated for all the iron-work

Extra brick-work. of the building. Also, the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the building,

Jobbing. do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

IRON-WORK.

Antæ. There will be in the entrance story twelve (12) square antæ; in the second story, eight (8), and eight (8) in the third story, twelve (12) inches square and three-quarters ($\frac{3}{4}$) of an inch thick. In the entrance story there will be

Columns. twelve (12) round columns, in the second story four (4), and in the third four (4), twelve (12) inches diameter at their bases and ten (10) inches at their necks. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

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There will be furnished by the Treasury Department the following wrought iron *beams* and *girders*, for the floors and ceilings, viz: Beams and girders.

6	girders	18	feet	0	inches	long,	14	inches deep.
2	"	17	"	8	"		14	"
46	"	16	"	0	"		14	"
2	"	15	"	4	"		14	"
222	beams	18	"	0	"	shape of	drawing.	
105	"	16	"	0	"		"	
2	"	13	"	2	"		"	
1	"	11	"	6	"		"	
1	"	9	"	0	"		"	
1	"	5	"	0	"		"	

together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawing No. 9. They will be delivered, upon a suitable wharf, at Providence, by the Department, and, by the contractor, taken thence, and put into the building.

The window casings, and frames, and the casings of 17 inside doors must be of cast iron; the window frames must be constructed for French casement sash, (which must be of iron,) with their proper hangings, fixtures, fastenings, &c., complete; the inside window shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 12.) Window and door frames, &c.

The iron-worker must furnish, to the mason, as he may need it for use, all the iron-work mentioned, in the former part of these specifications, as to be furnished by the iron-worker, and the mason, or bricklayer must insert the same in the building, as it progresses. To furnish all iron-work.

The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight. Antæ cast true.

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought, and cast iron, in two flights, from the entrance to the third story, and one flight, from the third to the half story above. From the end of the passage in this half-story, he must construct a flight of stairs, (not shown on the, lithograph drawing, plans,) 3 feet wide, to the attic floor, and from thence to the scuttle on the roof, by which it may be approached for any purpose. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, Stairways.

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wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawing No. 12.)

Galvanized iron roof, gutters, &c.

He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawing No. 9. He must also

Thresholds.

furnish, and set in place, cast iron thresholds to all the interior doors.

Miscellaneous.

He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do,

Jobbing.

and perform all the blacksmith and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

The iron-worker must give the price for furnishing, at the building, properly fitted to put into its place, and do what the specifications require of him, on the other part, all the ornamental parts of the door and window dressings, the belt courses, and the cornice of the exterior, provided it be necessary to construct the same of iron.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling.

The joist, or scantling, must be spruce pine; the floor boards $\frac{6}{4}$-inch heart, southern, pine, not more than 5 inches in width; the doors, and other inside finishings, and window

Finishings.

frames must be first quality white, or spruce pine; and

Stair-rails.

the stair rails, and the newels, and rails of the court room, best quality of mahogany for the purpose.

Floors.

The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to

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each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$ inch thick.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, with iron sash, and letter boxes between the iron antæ, with openings, &c., as per detail drawing No. 13, for delivery of letters, as the superintendent may direct.

Finish of custom house room. The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department,) equal in quality of stock, and workmanship to those in the Boston custom-house. The above includes suitable drawsers and cupboards, under the counter; but no desks, nor fixtures upon it. The walls of the court room must be panelled to the height of six (6) feet from the level of the floor of the bar; finished at the base with a skirting, and at the top with an impost moulding, as per detail drawing No. 13.

Finish of court room. The court room must be fitted with its railings, $2\frac{1}{4}$ by $3\frac{3}{4}$ inches, and newels 6 inches in diameter, and of proper heights; its judge's seat, desk, &c.; its clerk, and marshal's seat, desk, &c.; its dock, witness stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat must be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectator's seats must rise three inches, at least, to each seat, as they retire from the bar.

Fly doors. There must be constructed fly doors to the court, and custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

Finish of water closets. He must construct all the wood-work, and carpenter's work of the water-closets, &c., the seats of which must be of mahogany, and the reservoirs, holding 100 gallons each over each of the water-closets, to receive the water from the roof or cisterns in the yard, for the use of the water-closets, and other purposes, must be made of 2-inch plank, milled, jointed, and matched, firmly, and securely put together, and fully fitted to receive the lead lining to be put in by the plumber.

The mahogany stair rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

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Centres.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

Casing stone-work.

Jobbing.

PLASTERING, STUCCO-WORK, ETC.

Ceilings.

Three coat work.

Two coats on the brick walls.

Granite finish.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawing No. 8.

Cornice or angle moulds.

Jobbing.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner to the acceptance of the superintendent.

PAINTING AND GLAZING.

Glazing.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, and finished in imitation of granite.

Inside iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work.

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

Fresco.

The painter must "fresco," in the best manner, the

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ceilings of the vestibules of the post office, custom-house, and court-rooms, and the ceilings, and so much of the walls of the custom-house, and court-rooms as may be required of him.

PLUMBER'S WORK.

Reservoirs.

The reservoirs, over the water-closets, must be lined in the most perfect manner, with best eight-pound milled lead.

Force pump.

In the cellar must be a *forcing* pump, of best kind, and construction, for supplying the water-closet cisterns with water from the well on the premises.

Water-closets

The plumber must construct (with the exception of their carpenter's work) the eighteen (18) water closets mentioned in the former part of these specifications, and as shown on the plans, with all their fixtures complete, including supply, soil, and waste pipes, bowls, traps, basins, and urine-sinks, with their supply, and waste pipes, &c.

The soil pipes must be made of best eight-pound milled lead, and lead into the drains; and all the other pipes must be of the best, and heaviest kind, and fully equal to the greatest pressure ever to be put upon them. The plumber must secure the whole apparatus from the frost, and be responsible for any defect in their operations; furnish all the materials, of the best quality, and do and perform all the plumber's work, jobbing, &c., upon the building, to the satisfaction, and acceptance of the superintendent.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made

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Omissions, additions, and alterations.

for work, or material; and all such omissions, additions or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, as the case may be, before going into execution, or no allowance will be made for them by either party.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bill of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS.

Treasury Department, March 23, 1855

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

ELLSWORTH, MAINE.

Prepared at the Office of the Construction of Buildings, Treasury Department
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

ELLSWORTH, MAINE.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Ellsworth, Maine, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans, elevations, and section.
2. Details of exterior, &c.
3. Details of interior, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Main street, its front line being four (4) feet from said street, and its northeast corner five (5) feet from the line of Water street. The entrance story floor will be four (4) feet above the present surface of the ground at the northeast corner of the lot.

The premises on the east and north of the building must have a proper grade from the sidewalks up to the steps, and underpinning of the building to conform to the drawings; and on the west and south, a proper grade from the ground line on the drawings in each direction from the building.

Cellar window sky-lights.

Covering.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable

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and substantial *wrought iron* grating, let into a rebate in a suitable curb stone which must surround them, and be there properly secured.

Area walls. The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the

Paving of area. curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of side-walk. The sidewalks of the streets, and the approaches to the building from it, must be paved with the best hard paving brick, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls. The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully

Door and window jambs. secured against any settlement. The door and window jambs, and heads in the cellar wall, must be rough-hammered to receive the frames and window sashes, as may be

Size of stone. found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

The underpinning, the door sills, steps, &c., will be of the best quality of granite found in the vicinity.

Stone-work. The stone-work of the building must be well and properly dressed with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the mouldings of the panels of the piers, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of best selected face brick, and the moulding brick made to conform to shape shown on the drawing. A part of the cornice will be of iron, as shown by the drawing.

Outside doors. The outside doors and their frames, and the window shutters and their frames, must be of iron.

Floors. The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned

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from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with hard pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The antæ will rest upon square piers in the cellar with stone foundations below the cellar paving.

Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue at its opening into the room.

Ventilating flues.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Insert wooden blocks.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner.

Cellar floor.

Drains must be constructed, leading from the eave conductors to the river, as the superintendent may direct, to carry off the waste water from the premises.

Drains.

All the partitions in the building will be 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Interior hollow walls.

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Stairs.

The stairways, of the building, must be of *wrought* and *cast* iron-work, having a mahogany hand-rail, extending from the entrance story to the second one, and around the well hole therein, and a proper sized iron handrail to the cellar stairs. There will also be a step ladder of wrought iron, to ascend from the second story to the roof through a scuttle therein.

Cast iron eave conductors inserted in outside walls.

At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

Eave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 3 divisions, 3 by $4\frac{1}{2}$ feet, with a passage in front of them $3\frac{1}{2}$ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the com-

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pletion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by headers, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thicknes, must be inserted under them.

Solid at bearings.

Wall plates.

Fireplaces. The fireplaces must be made with fire-brick, and

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Omissions, additions, and alterations.

for work, or material; and all such omissions, additions or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, as the case may be before going into execution, or no allowance will be made for them by either party.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bill of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS.

Treasury Department, March 23, 1855

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

ELLSWORTH, MAINE.

Prepared at the Office of the Construction of Buildings, Treasury Department
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

ELLSWORTH, MAINE.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Ellsworth, Maine, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans, elevations, and section.
2. Details of exterior, &c.
3. Details of interior, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Main street, its front line being four (4) feet from said street, and its northeast corner five (5) feet from the line of Water street. The entrance story floor will be four (4) feet above the present surface of the ground at the northeast corner of the lot.

The premises on the east and north of the building must have a proper grade from the sidewalks up to the steps, and underpinning of the building to conform to the drawings; and on the west and south, a proper grade from the ground line on the drawings in each direction from the building.

Cellar window sky-lights.

Covering.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable

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and substantial *wrought iron* grating, let into a rebate in a suitable curb stone which must surround them, and be there properly secured.

Area walls. The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the

Paving of area. curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of sidewalk. The sidewalks of the streets, and the approaches to the building from it, must be paved with the best hard paving brick, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls. The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully

Door and window jambs. secured against any settlement. The door and window jambs, and heads in the cellar wall, must be rough-hammered to receive the frames and window sashes, as may be

Size of stone. found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

The underpinning, the door sills, steps, &c., will be of the best quality of granite found in the vicinity.

Stone-work. The stone-work of the building must be well and properly dressed with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the mouldings of the panels of the piers, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of best selected face brick, and the moulding brick made to conform to shape shown on the drawing. A part of the cornice will be of iron, as shown by the drawing.

Outside doors. The outside doors and their frames, and the window shutters and their frames, must be of iron.

Floors. The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned

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from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with hard pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The antæ will rest upon square piers in the cellar with stone foundations below the cellar paving.

Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue at its opening into the room.

Ventilating flues.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Insert wooden blocks.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner.

Cellar floor.

Drains must be constructed, leading from the eave conductors to the river, as the superintendent may direct, to carry off the waste water from the premises.

Drains.

All the partitions in the building will be 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Interior hollow walls.

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Stairs.

The stairways, of the building, must be of *wrought* and *cast* iron-work, having a mahogany hand-rail, extending from the entrance story to the second one, and around the well hole therein, and a proper sized iron handrail to the cellar stairs. There will also be a step ladder of wrought iron, to ascend from the second story to the roof through a scuttle therein.

Cast iron eave conductors inserted in outside walls.

At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* (½) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

Eave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 3 divisions, 3 by 4½ feet, with a passage in front of them 3½ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the com-

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pletion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by headers, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thicknes, must be inserted under them.

Solid at bearings.

Wall plates.

Fireplaces. The fireplaces must be made with fire-brick, and

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Grates. have a marble mantel, to be worth $20 each, exclusive of their setting, and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Hearths. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Heating apparatus. There must be constructed in the cellar one furnace, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ. The whole to be finished complete, and put up in good working order, with all the

Hot-air registers. hot-air registers, &c. In the entrance story, 3 hot-air registers 15 by 19 inches; and in the second story, 1 ditto 11 by 15 inches, and 2 ditto 15 by 19 inches: all which must be inserted in soap-stone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Coal slides. Suitable coal-slides, to lead to the cellar, must be constructed, with proper covers, &c.

Extra brick-work. The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings;

Jobbing. do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

IRON-WORK.

Beams and girders. There will be furnished by the Treasury Department, wrought iron *beams* and *girders*, for the floors, ceilings, and roof, together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Ellsworth, by the Department, and, by the contractor, taken thence, and put into the building.

To furnish all other iron-work. The iron-worker must furnish all the other iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on

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the building, and by them to be inserted in the building as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished.

Antæ. There will be in the entrance story 4 square antæ twelve (12) inches square and three-eighths ($\frac{3}{8}$) of an inch thick, with capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

Window. The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the cast-iron frames, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawings.)

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawings.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawings. He must also furnish and set in place, cast iron thresholds to all the interior doors.

Thresholds.

Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compen-

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sation for work performed, and materials furnished. He must do, and perform all the blacksmith and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling.

The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames, must be first quality white, or spruce pine; and the stair-rails, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors.

The floors of all the stories must be $\frac{6}{4}$ inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors.

The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings.

Post office fittings.

The entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawings.)

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

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The mahogany stair-rail will be 2¼ by 3 inches, wrought to pattern in best manner.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

Centres.

Casing stone-work.

Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawings.

Ceilings. Three coat work

Two coats on the brick walls. Granite finish.

Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent.

Jobbing.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

Glazing

The number of lights, sizes, &c., as indicated on the drawings.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Exterior iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Inside iron-work.

All the wood-work, except the floors and mahogany

Grained work.

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work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

Omissions, additions, and alterations.

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MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, July 27, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

BELFAST, MAINE.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

BELFAST, MAINE.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Belfast, Maine, which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans, Elevations, and Section.
2. Details of Exterior, &c.
3. Details of Interior, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location. The building will front upon Main street, and be located, as indicated by the drawings, between that and Franklin street, the east end being 7 feet 6 inches from the latter street. The heights of the entrance-story floor, and the grade of the grounds around the building, are to conform to the different drawings.

Cellar-window sky-lights. On the sides, and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable Covering and substantial *wrought iron* grating, let into a rebate in a suitable curbstone which must surround them, and be there properly secured.

Area walls. The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen

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(18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalks of the two streets, and the approaches to the building from them, must be paved either with the best hard-paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window jambs, and heads in the cellar wall, must be rough-hammered to receive the window frames and sashes, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Window jambs.

Size of stone.

The underpinning, the door and window sills, the door steps, &c., will be of the best quality of granite found in the vicinity.

Stone-work.

The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the belt courses, capitals, mouldings, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of pressed-face brick, and the moulding brick made to conform to shape shown on the drawing; a part of the cornice will be of iron, as shown by the drawing.

Outside doors, window frames &c.

The outside doors, and the bead of the window frames, and the window shutters and their frames, must be of iron.

Floors.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards. The ceiling, of the upper story,

Ceiling of upper story.

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must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon stone foundations below the cellar paving, must extend up through the cellar and the several stories, and support their floors, and ceilings.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

Ventilating flues.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue.

Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner.

The entrance hall, and vestibule to the post office, in the first story, and the vestibules to the custom-house, and room, in the second story, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Drains.

Drains must be constructed, leading from the eave conductors to the gutters of the streets, to carry off the waste waste water from the premises, as may be directed by the superintendent.

Interior hollow walls.

All the partitions in the building will be 8 and 10-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and

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do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do, and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Stairs. The stairways, to the building, must be of *wrought*, and *cast* iron-work, with a mahogany hand-rail, in two flights, extending from the cellar to the upper story. The cellar stairs must be of iron, and with proper sized iron hand-rail.

Cast iron eave conductors inserted in outside walls. At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

Eave pipes, elbows, &c. The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 4 divisions, 3 by $4\frac{1}{2}$ feet, with a passage in front of them $3\frac{1}{2}$ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation. The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the fonndation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and, on the exterior, filled, with proper earth, up to the proper grade line of the premises as may hereafter be more definitely determined.

Removing earth and rubbish. All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that

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may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets, and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying. All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing. All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by leaders, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Solid at bearings.

Wall plates.

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Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $20 each, exclusive of their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Grates.

Hearths. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Heating apparatus. There must be constructed in the cellar one furnace, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ. The whole to be finished complete, and put up in good working order, with all the

Hot-air registers hot-air registers, &c. In the entrance story, 3 hot-air registers 15 by 19 inches; and in the second story, 3 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Coal slides. Suitable coal-slides, to lead to the cellar, must be constructed from the sidewalks, with proper covers, &c.

Extra brick-work. The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings;

Jobbing. do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

IRON-WORK.

Antæ. There will be in the entrance story 5 square antæ thirteen (13) inches square and three-quarters ($\frac{3}{4}$) of an inch thick, and one in the upper story 13 by 6 inches $\frac{3}{4}$ inch thick All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

The girders of the entrance-story ceiling and second story floor will be of cast-iron, and must be furnished by the contractor.

Beams and girders. There will be furnished by the Treasury Department the following wrought iron *beams* and *girders*, for the floors and ceilings, viz:

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1	girder	25	feet 9	inches	long,	18	inches deep.
1	"	17	" 10	"		18	"
1	"	9	" 4	"		12	"
2	"	8	" 3	"		12	"
1	"	6	" 8	"		12	"
30	beams	17	" 6	"		shape of drawing.	
30	"	12	" 0	"		"	

together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Belfast, by the Department, and, by the contractor, taken thence, and put into the building.

Window. The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the cast-iron frames, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 2.)

To furnish all iron-work. The iron-worker must furnish, to the mason, as he may need it for use, all the iron-work mentioned, in the former part of these specifications, as to be furnished by the iron-worker, and the mason, or bricklayer must insert the same in the building, as it progresses.

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought, and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawing No. 3.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawing No. 3. He must also furnish, and set in place, cast iron thresholds to all the interior doors.

Thresholds.

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Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do,

Jobbing. and perform all the blacksmith and iron-worker's jobbing on the buildings, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches

Finishings. in width; the doors, and other inside finishings, and window frames must be first quality white, or spruce pine; and

Stair-rails. the stair-rails, best quality of mahogany for the purpose.

Floors. The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred. and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes

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between the iron antæ, with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawing No. 3.)

The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. Finish of custom-house room.

There must be constructed a fly door to the custom-house room, the frame $\frac{4}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete. Fly doors.

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the buildings, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent. Centres. Casing stone-work. Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawing Nos. 1 & 3. Ceilings. Three coat work. Two coats on the brick walls. Granite finish. Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner to the acceptance of the superintendent. Jobbing.

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PAINTING AND GLAZING.

Glazing

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Inside iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work.

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made

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for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party. Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, April 19, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

GLOUCESTER, MASSACHUSETTS.

Prepared at the Office of the Construction of Buildings, Treasury Department
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

GLOUCESTER, MASS.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Gloucester Mass., which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations and cellar.
2. Plans of first and second stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Details of roof, &c.
6. " exterior, &c.
7. " " and interior, &c.
8. " cornice, stairs, &c.
9. " miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Spring or Front street, its front line being fifteen (15) feet from said street, and its west flank eight (8) feet from Pleasant street. The entrance story floor will be four (4) feet above the present surface of the ground at the northwest corner of the lot at Pleasant street.

The premises on the west and south of the building must have a proper grade from the sidewalks up to the steps, and underpinning of the building to conform to the drawings; and on the east and north, a proper grade

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from the ground line on the drawings in each direction from the building.

Cellar window sky-lights.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curb stone which must surround them, and be there properly secured.

Covering.

Area walls.

The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalk of the street, and the approaches to the building from it, must be paved either with the best hard paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window jambs, and heads in the cellar wall, must be rough-hammered to receive the window frames, and sashes, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Window jambs.

Size of stone.

The underpinning, the door sills, steps, &c., will be of the best quality of granite found in the vicinity.

Stone-work.

The stone-work of the building must be well and properly dressed with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the mouldings of the panels of the piers, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of pressed-face brick, and the moulding brick made to conform to shape shown

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on the drawing. A part of the cornice will be of iron, as shown by the drawing.

The outside doors, their frames, circular caps, transom and ornamented sash screen, the window sills, post, caps, &c., the bead of the window frames, and the window shutters and their frames, must be of iron. Outside doors, window frames, &c.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or hard pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon square piers in the cellar with their stone foundations below the cellar paving, must extend from said piers up through the stories, and support their floors, and ceilings. Floors. Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue at its opening into the room. Ventilating flues

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work. Insert wooden blocks.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner. Cellar floor.

The entrance hall, and vestibule to the post office, in the first story, and the vestibule to the custom-house and rooms, in the second story, must be paved with the best quality

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2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Drains.

Drains must be constructed, leading from the eave conductors to a dry well or cess-pool on the premises, as the superintendent may direct, to carry off the waste water from the premises.

Interior hollow walls.

All the partitions in the building will be 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Stairs.

The stairways, of the building, must be of *wrought* and *cast* iron-work, having a mahogany hand-rail, extending from the entrance story to the second one, and around the well hole therein, and a proper sized iron handrail to the cellar stairs. There will also be a step ladder of wrought iron, to ascend from the second story to the roof through a scuttle therein.

Cast iron eave conductors inserted in outside walls.

At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

ave pipes, lbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 5 divisions, 3 by $4\frac{1}{2}$ feet, with a passage in front of them $3\frac{1}{2}$ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

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DIGGING, GRADING, &c.

Excavation

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying.

All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Cramped and anchored.

The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work,

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by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by headers, every fifth course, at intervals of two bricks. Where heavy weights come on

Solid at bearings. the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam,

Wall plates. rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thicknes, must be inserted under them.

Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $20 each, exclusive of

Grates. their setting, and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Hearths. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Heating apparatus. There must be constructed in the cellar one furnace, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ. The whole to be finished complete, and put up in good working order, with all the

Hot-air registers. hot-air registers, &c. In the entrance story, 2 hot-air registers 15 by 19 inches, and 2 ditto 11 by 15 inches; and in the second story, 2 ditto 11 by 15 inches, and 2 ditto 15 by 19 inches: all which must be inserted in soap-stone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Coal slides. Suitable coal-slides, to lead to the cellar, must be constructed, with proper covers, &c.

Extra brick-work. The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings;

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do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

There will be furnished by the Treasury Department, wrought iron *beams* and *girders*, for the floors, ceilings, and roof, together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Gloucester, by the Department, and, by the contractor, taken thence, and put into the building. Beams and girders.

The iron-worker must furnish all the other iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished. To furnish all other iron-work.

There will be in the entrance story 5 square antæ ten (10) inches square and five-eighths ($\frac{5}{8}$) of an inch thick, and (3) round columns twelve (12) inches at their base, and ten (10) inches at their necks, and five-eighths ($\frac{5}{8}$) of an inch thick. In the second story there will be 4 square antæ and 4 round columns of the same size and thickness as those in the entrance story. Antæ.

All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the cast-iron frames, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawings.) Window.

The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight. Antæ cast true.

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part

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Stairways. of the work, the stairs, of wrought and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawings.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawings. He must also furnish

Thresholds. and set in place, cast iron thresholds to all the interior doors.

Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do, and perform all the blacksmith and iron-worker's

Jobbing. jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches

Finishings. in width; the doors, and other inside finishings, and window frames, must be first quality white, or spruce pine; and

Stair-rails. the stair-rails, best quality of mahogany for the purpose.

Floors. The floors of all the stories must be $\frac{6}{4}$ inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of

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the building requiring it, must be furred, and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawings.)

Finish of custom-house room. The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it.

Fly door. There must be constructed a fly door to the custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

Centres. He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

Casing stone-work.

Jobbing.

PLASTERING, STUCCO-WORK, ETC.

Ceilings. Three coat work All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be

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Two coats on the brick walls. Granite finish.

plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the

Cornice or angle moulds.

rooms must have a moulding, in the angles at the ceiling, as represented on the drawings.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary

Jobbing.

jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent.

PAINTING AND GLAZING.

Glazing

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Inside iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, speci-

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fied or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for. Work and material not specified.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party. To be done under superintendent. Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, June 30, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

BARNSTABLE, MASS.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

BARNSTABLE, MASS.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Barnstable, Mass., which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans, Elevations, and Section.
2. Details of Exterior, &c.
3. Details of Interior, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon the main county road, its front line being some twenty-five or thirty feet back of the line of said road. The floor of the entrance story will be two feet above the present grade line of the lot where the front of the building will come.

Cellar-window sky-lights.

On the sides, and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curbstone which must surround them, and be there properly secured.

Covering

Area walls.

The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen

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(18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalk of the street, and the approaches to the building from it, must be paved either with the best hard-paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window jambs, and heads in the cellar wall, must be rough-hammered to receive the window frames and sashes, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Window jambs.

Size of stone.

The underpinning, the door and window sills, the door steps, &c., will be of the best quality of granite found in the vicinity.

Stone-work.

The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the belt courses, capitals, mouldings, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of pressed-face brick, and the moulding brick made to conform to shape shown on the drawing. A part of the cornice will be of iron, as shown by the drawing.

Outside doors, window frames &c.

The outside doors, and the bead of the window frames, and the window shutters and their frames, must be of iron.

Floors.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards. The ceiling, of the upper story,

Ceiling of upper story.

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must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon stone foundations below the cellar paving, must extend up through the cellar and the several stories, and support their floors, and ceilings.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

Ventilating flues.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue.

Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner.

The entrance hall, and vestibule to the post office, in the first story, and the vestibule to the custom-house and room, in the second story, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Drains.

Drains must be constructed, leading from the eave conductors to the gutters of the streets, to carry off the waste water from the premises, as may be directed by the superintendent.

Interior hollow walls.

All the partitions in the building will be 8 and 10-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and

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do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do, and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Stairs.

The stairways, to the building, must be of *wrought*, and *cast* iron-work, with a mahogany hand-rail, extending from the entrance to the upper story, the cellar stairs with proper sized iron hand-rail.

Cast iron eave conductors inserted in outside walls.

At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

Eave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 4 divisions, 3 by $4\frac{1}{2}$ feet, with a passage in front of them $3\frac{1}{2}$ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the fonndation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and, on the exterior, filled, with proper earth, up to the proper grade line of the premises as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that

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may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets, and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying. All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing. All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by leaders, every fifth course, at intervals of two bricks. Where heavy weights come on

Solid at bearings. the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam

Wall plates. rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

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Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $20 each, exclusive of

Grates. their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Hearths. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Heating apparatus. There must be constructed in the cellar one furnace, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ. The whole to be finished complete, and put up in good working order, with all the

Hot-air registers; hot-air registers, &c. In the entrance story, 3 hot-air registers 15 by 19 inches; and in the second story, 3 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Coal slides. Suitable coal-slides, to lead to the cellar, must be constructed from the sidewalks, with proper covers, &c.

Extra brick-work. The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings;

Jobbing. do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

IRON-WORK.

Antæ. There will be in the entrance story 5 square antæ thirteen (13) inches square and three-quarters ($\frac{3}{4}$) of an inch thick, and one in the upper story 13 by 6 inches $\frac{3}{4}$ inch thick. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

The girders of the entrance-story ceiling and second story floor will be of cast-iron, and must be furnished by the contractor.

Beams and girders. There will be furnished by the Treasury Department the following wrought iron *beams* and *girders*, for the floors and ceilings, viz:

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1	girder	25	feet	9	inches	long, 18 inches	deep.
1	"	17	"	10	"	18 "	
1	"	9	"	4	"	12 "	
2	"	8	"	3	"	12 "	
1	"	6	"	8	"	12 "	
30	beams	17	"	6	"	shape of drawing.	
30	"	12	"	0	"	"	

together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Barnstable, by the Department, and, by the contractor, taken thence, and put into the building.

Window. The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the cast-iron frames, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 2.)

To furnish all iron-work. The iron-worker must furnish, to the mason, as he may need it for use, all the iron-work mentioned, in the former part of these specifications, as to be furnished by the iron-worker, and the mason, or bricklayer must insert the same in the building, as it progresses.

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought, and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawing No. 3.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawing No. 3. He must also furnish, and set in place, cast iron thresholds to all the interior doors.

Thresholds.

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Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do, and perform all the blacksmith and iron-worker's jobbing on the buildings, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames must be first quality white, or spruce pine; and the stair-rails, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors. The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred. and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes

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between the iron antæ, with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawing No. 3.)

The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. Finish of custom-house room.

There must be constructed a fly door to the custom-house room, the frame $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete. Fly doors.

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the buildings, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent. Centres. Casing stone work. Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawing Nos. 1 & 3. Ceilings. Three coat work. Two coats on the brick walls. Granite finish. Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner to the acceptance of the superintendent. Jobbing.

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PAINTING AND GLAZING.

Glazing

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Inside iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work.

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made

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for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party. Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, April 19, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

BURLINGTON, VERMONT.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

BURLINGTON, VT.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Burlington, Vt., which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations and cellar.
2. " first and second stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Details of roof, &c.
6. " exterior, &c.
7. " " and interior, &c.
8. " cornice, stairs, &c.
9. " miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Church street, its front line being fifty (50) feet from said street, and its north end fifty (50) feet from Maine street. The entrance story floor will be six (6) feet above the *base or grade line* at the intersection of said streets.

The premises on the west and north of the building must have a proper grade from the sidewalks up to the steps, and underpinning of the building to conform to the drawings; and on the east and south, a proper grade from

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the ground line on the drawings, seventy-five (75) feet in each direction from the building.

Cellar-window sky-lights.

On the sides, and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curbstone which must surround them, and be there properly secured.

Covering

Area walls.

The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of side-walk.

The sidewalk of the street, and the approaches to the building from it, must be paved either with the best hard-paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window jambs, and heads in the cellar wall, must be rough-hammered to receive the window frames and sashes, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Window jambs.

Size of stone.

The underpinning, the door sills, steps, &c., will be of the best quality of Barre, Vt., granite.

Stone-work.

The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the mouldings of the panels of the piers, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of pressed-face brick, and the moulding brick made to conform to shape shown

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on the drawing. A part of the cornice will be of iron, as shown by the drawing.

The outside doors, their frames, circular caps, transom and ornamented sash screen, the window sills, post, caps and screens of the windows, the bead of the window frames, and the window shutters and their frames, must be of iron. Outside doors, window frames &c.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or hard pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon square piers in the cellar with their stone foundations below the cellar paving, must extend from said piers up through the stories, and support their floors, and ceilings. Floors. Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue. Ventilating flues.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work. Insert wooden blocks.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner. Cellar floor.

The entrance hall, and vestibule to the post office, in the first story, and the vestibule to the custom-house and

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rooms, in the second story, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Drains.

Drains must be constructed, leading from the eave conductors to the rear of the premises, as the superintendent may direct, to carry off the waste water from the premises.

Interior hollow walls.

All the partitions in the building will be 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do, and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion. and permanency in the building.

Stairs.

The stairways of the building, must be of *wrought*, and *cast* iron-work, having a mahogany hand-rail, extending from the entrance story to the second one, and around the well hole therein, and a proper sized iron handrail to the cellar stairs. There will also be a step ladder of wrought iron, to ascend from the second story to the roof through a scuttle therein, instead of the stairway shown upon the drawings.

The stairway from the entrance story to the second one, will start two or three steps forward of the position shown upon the drawings, and land the same number of steps in the second story back of the position shown on the drawings, giving more heighth of headway under the broad corner steps—they will be closed under the string against the cellar stairway, which will be an enclosed stairway with a door at its top opening into the vestibule of the entrance story under the fourteenth riser of the stairs going to the second story, as they will be constructed.

The position of the cellar stairs were by mistake omitted on the plans, but are shown in the longitudinal section.

Cast iron eave conductors inserted in outside walls.

At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

ave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

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On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 6 divisions, 3 by 4½ feet, with a passage in front of them 3½ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and, on the exterior, filled, with proper earth, up to the proper grade line of the premises as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets, and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

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Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying. All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing. All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by leaders, every fifth course, at intervals of two bricks. Where heavy weights come on

Solid at bearings. the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam

Wall plates. rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $20 each, exclusive of

Grates. their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Hearths. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Heating apparatus. There must be constructed in the cellar one furnace, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ. The whole to be finished complete, and put up in good working order, with all the

Hot-air registers. hot-air registers, &c. In the entrance story, 2 hot-air registers 15 by 19 inches, and 2 ditto 11 by 15 inches; and in the second story, 2 ditto 11 by 15 inches, and 2 ditto 15 by 19 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be

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carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Suitable coal-slides, to lead to the cellar, must be constructed with proper covers, &c. Coal slides.

The mason must give the price, per thousand, for laying any extra brick-work required. Extra brick work.

There must also be constructed at the east side of the building a bulkhead or entrance into the cellar, 4 feet wide under the second window from the north end, with proper stone walls, stone steps, iron door, &c. This is not shown upon the plans.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

There will be in the entrance story 2 square antæ ten (10) inches square and five-eighths ($\frac{5}{8}$) of an inch thick, and six (6) round columns twelve (12) inches at their base, and ten (10) inches at their necks and five-eighths ($\frac{5}{8}$) of an inch thick. In the second story there will be 3 square antæ and 5 round columns of the same size and thickness as those in the entrance story—a part of which are not shown upon the lithographed drawings. Antæ.

All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

There will be furnished by the Treasury Department the following wrought iron *beams* and *girders*, for the floors and ceilings, viz: Beams and girders.

18 girders 12 feet long, 12 inches deep.
12 " 11 " 12 "
84 beams 16 " shape of drawing.
42 " 11 feet 6 inches "

together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Burlington, by the Department, and, by the contractor, taken thence, and put into the building.

The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to Window.

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the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the cast-iron frames, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawings.)

To furnish all iron-work.

The iron-worker must furnish, to the mason, as he may need it for use, all the iron-work mentioned, in the former part of these specifications, as to be furnished by the iron-worker, and the mason, or bricklayer must insert the same in the building, as it progresses.

Antæ cast true.

The antæ must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight.

Stairways

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought, and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawings.)

Galvanized iron roof, gutters, &c.

He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawings. He must also furnish,

Thresholds.

and set in place, cast iron thresholds to all the interior doors.

Miscellaneous.

He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do,

Jobbing.

and perform all the blacksmith and iron-worker's jobbing on the buildings, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly sea-

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soned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames must be first quality white, or spruce pine; and the stair-rails, best quality of mahogany for the purpose. Scantling. Finishings. Stair-rails.

The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering. Floors.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings. Doors.

The entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawings.) Post office fittings.

The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. Finish of custom-house room.

There must be constructed a fly door to the custom-house room, the frame $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete. Fly doors.

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

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Centres.
Casing stone work.
Jobbing.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the buildings, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

PLASTERING, STUCCO-WORK, ETC.

Ceilings.
Three coat work.
Two coats on the brick walls.
Granite finish.
Cornice or angle moulds.
Jobbing.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawings.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner to the acceptance of the superintendent.

PAINTING AND GLAZING.

Glazing
Exterior iron-work.
Inside iron-work.
Grained work.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

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All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner. Varnishing.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat. Oiling and varnishing floors.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

GENERAL CONDITIONS.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for. Manner of executing the work. Work and material not specified.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party. To be done under superintendent. Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, April 30, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AT

NEW HAVEN, CONNECTICUT,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department,
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AT NEW HAVEN, CONN.,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for erecting a new custom-house, at New Haven, Ct., including accommodations for a post office, and United States court room, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations, cellar, and entrance story.
2. Plans of second and third stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Drawing and details of roof.
6. " " " exterior.
7. " " " interior.
8. " " " windows and doors.
9. " " " miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Church street, its front line being twenty (20) feet from said street, and midway between the side lines of the premises. The entrance story floor will be five (5) feet above the inside line of the side-walk of the premises at the line of said street. The premises must have a proper grade up to the building from the side-walk.

Cellar window sky-lights. Covering.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the side-walk down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curb-

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stone which must surround them, and be there properly secured.

Area walls. The walls of these areas will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas

Paving of area. must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of side-walk. The side-walk of the street, and the approaches to the building from it, must be paved either with the best hard paving brick, or stone flagging, laid to a curb-stone of the best material and form to be obtained in the vicinity.

Cellar, its brick partition wall. A brick wall will divide the post office packing-room from the post office wash-room and the fuel and furnace room in the cellar, and iron stairways must come down from the entrance story into each of the last two rooms.

Cellar walls. The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully

Window and door jambs. secured against any settlement. The window, and door jambs, and heads in the cellar wall, must be rough-hammered, and rebated to receive the window frames, and sashes, and the doors, or doors and frames, as may be

Size of stone. found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Stone-work. The entire exterior of the building will be faced with the most durable stone to be obtained in the vicinity, including the door and window dressings, the belt courses, cornice, &c. The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds and builds full to the square, and perfect, and the whole to be left clean, and perfect, on the completion of the building.

Outside doors, window frames, &c. The outside doors, and the bead of the window frames, and the window shutters and their frames, must be of iron.

Floors. The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern

g of tory. pine flooring plank, or boards. The ceiling, of the upper

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story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon stone foundations below the cellar paving, must extend up through the cellar and the several stories, and support their floors, and ceilings.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

Ventilating flues.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue.

Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside door-sills to all the cellar doors.

The entrance hall, and vestibule to the post office, in the first story, the vestibules and entrance to the custom-house and rooms, in the second story, and the vestibules and passages to the court rooms and its offices, in the third and half stories, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Sewer.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, (agreeably to the municipal laws and regulations of the city of New Haven) through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged.

Drains.

Drains must be constructed, leading from the eave conductors, and soil pipes of the water-closets, and sinks, to the above sewer, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of

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4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations be constructed in connexion with them, and fully secured against frost.

Interior hollow walls.

All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Half stories at rear end.

The upper story, at the east end, must be divided into two stories by the insertion of an intermediate flooring, shown only on the longitudinal section, and the upper one fully lighted and ventilated by sky-lights on roof, not shown on the drawings. The plan and finish of the upper rooms must be similar to those under them, as shown on drawing No. 4.

Stairs.

The stairways, to the building, must be of *wrought* and *cast* iron-work, with a mahogany hand-rail, in two flights, extending from the entrance story to the upper, and upper half story, From the upper half story to the roof, there must be constructed an enclosed flight of stairs, three (3) feet wide, with small iron hand-rail, as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron hand-rail.

Water-closets.

There must be two (2) water-closets in the third story and two others over them; all of which must be furnished with proper and necessary spring seats, bowls, traps, urine sinks, &c., complete; also with tanks, and cisterns, capable of holding, on an average, two hundred (200) gallons of water, to each closet, placed immediately over them, and receiving their supplies from the roof, or from the cistern or well on the premises when the roof does not furnish the necessary quantity. All their main and supply pipes, &c., must be inserted in the brick-work as it goes up, and be fully secured against the action of the frost, and a channel left to receive the soil pipe, which, when put in, must also be fully guarded and secured against the action of the frost.

Cast iron eave conductors inserted in outside walls to filtering apparatus.

At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

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There must also be another water conductor, *three* (3) inches in diameter, from the eaves to the cisterns of the water-closets in the upper stories, for use in warm weather, with the necessary apparatus to close it during cold weather. Another conductor from eaves to water-closets.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead. Eave pipes, elbows, &c.

At a suitable position on the premises, there must be sunk one or more cisterns of brickwork in hydraulic cement mortar, and thoroughly plastered upon their inside with same kind of mortar, to receive the rainwater of the roof, and to supply the reservoirs with water for all purposes. They must have attached to them a suitable and efficient filtering apparatus, equal to fully purifying the water before it goes into the cisterns. They must hold 20,000 gallons in the aggregate, and have suitable iron pipes, laid below the action of the frost, extending from the eve conductors to the filterers. The cisterns must be arched over so as to sustain any weight that may come upon them, and at the crown of the arch have a *man-hole* covered with a suitable stone slab. If found advisable, an artesian well will be substituted for the above cistern or cisterns on the premises, by order of the Treasury Department.

From the above cisterns or artesian well, proper supply pipes must be extended to all parts of the building, and a suitable and approved forcing pump, of a sufficient power, and capacity to, properly, distribute the water, as above, and placed, secured in the most convenient location on the premises. Supply pipes. Force pump.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 10 divisions, 3 by 4½ feet, with a passage in front of them 3½ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with

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proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Stone.

The bidder must furnish to the Treasury Department a sample of the stone which he proposes to put into the exterior of the building. It must be a *cube* of six (6) inches square on each face, and five of its six faces wrought in the several manners of working the stone in the vicinity,

Dressing.

and the sixth face left as a split, rough surface, with half of an inch at each edge, tooled or chiselled straight and true.

Manner of laying.

All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Thickness of ashlar.

Three-quarters of the ashlar of the first story must be fourteen (14) inches thick from its face, and the other quarter, as headers and binders, from eighteen (18) to twenty (20) inches thick. In the second story, the corners must be from thirteen (13) to seventeen (17) inches thick from their face; three-quarters of the remainder of the ashlar must be ten (10) inches thick, and one-fourth, as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the third story, the corners must

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be from twelve (12) to sixteen (16) inches thick from their face; three-fourths of the remainder of the ashlar nine (9) inches, and the residue, as headers and binders, from thirteen (13) to seventeen (17) inches thick.

Doorway piers

The piers, of the doorways, provided they can be so obtained, must be in three blocks, the *base* being one, the *shaft* another, and the *capital* the third. The stones, composing the window, and door dressings, the *belt courses*, and cornice, must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places. All the stone must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and imbedded in the stone, and secured with brimstone, in the best manner, by the mason.

Bed of stone to corner &c.

Cramped and anchored.

Backing.

All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Solid at bearings.

Wall plates.

Fireplaces.

The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $30 each, exclusive of their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Grates.

Hearths.

Heating apparatus.

There must be constructed in the cellar one or two furnaces, (as may be thought best,) of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ, chimney, &c. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15; and in the half-story, 2 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent

Hot-air registers.

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Coal slides.

Suitable coal-slides, to lead to the cellar, must be constructed, with proper covers, &c.

The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason's work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

Jobbing.

IRON-WORK.

Beams and girders.

There will be furnished by the Treasury Department, wrought iron *beams* and *girders*, for the floors, ceilings, and roof, together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at New Haven, by the Department, and, by the contractor, taken thence, and put into the building.

To furnish all other iron-work.

The iron-worker must furnish all the other iron work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished.

Antæ.

There will be in the cellar twelve (12) round columns, sixteen (16) inches at their base, and fourteen (14) at their necks, and three-fourths ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10) square antæ; in the second story, eight (8), and four (4) in the third story, twelve (12) inches square and three-quarters ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10) round columns, and in the third, four (4), fourteen (14) inches diameter at their bases and twelve (12) inches at their necks. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

Columns.

Window.

The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, or to the stone jambs, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 8.)

Antæ cast true.

The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the

bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought and cast iron, in two flights, from the entrance to the third story, and one flight, from the third to the half story above. From the end of the passage in this half-story, he must construct a flight of stairs, (not shown on the, lithograph drawing, plans,) 3 feet wide, to the attic floor, and from thence to the scuttle on the roof, by which it may be approached for any purpose. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly moulded balusters secured to the steps by nuts, and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawing No. 9.)

Galvanized iron roof, gutters, &c.

He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have proper sky-lights inserted in it to properly light and ventilate the half-story at the east end; and it must also have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawing No. 5. He must also furnish and set in place, cast iron thresholds to all the interior doors.

Thresholds.

Miscellaneous.

He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use. He must do, and perform all the blacksmith and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling.

The joist, or scantling, must be spruce or white pine; the floor boards $\frac{5}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames, must be first quality white, or spruce pine; and the stair-rails, and the newels, and rails of the court room, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors.

The floors of all the stories must be $\frac{5}{4}$-inch thick, milled,

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jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The cantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of black walnut, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by 4½ inches, with 1¾-inch screws, and have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$-inch thick.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, with iron sash, and letter boxes between the iron antæ, with openings, &c., as per detail drawing No. 9, for delivery of letters, as the superintendent may direct.

Finish of custom-house room. The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. The walls of the court room must be panelled to the height of six (6) feet from the level of the floor of the bar; finished at the base with a skirting, and at the top with an impost moulding, as per detail drawing.

Finish of court room. The court room must be fitted with its railings, 2¼ by 3¾ inches, and newels 6 inches in diameter, and of proper heights; its judge's seat, desk, &c.; its clerk, and marshal's seat, desk, &c.; its dock, witnesses' stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat must be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectators' seats must rise three inches, at least, to each seat, as they retire from the bar.

Fly doors. There must be constructed fly doors to the court, and custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

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He must construct all the wood-work, and carpenter's work of the water-closets, &c., the seats of which must be of mahogany, and the reservoirs, holding 200 gallons each, over each of the water-closets, to receive the water from the roof, cisterns, or artesian well, for the use of the water-closets, and other purposes, mus tbe made of 2-inch plank, milled, jointed, and matched, firmly, and securely put together, and fully fitted to receive the lead lining to be put in by the plumber. Finish of water-closets.

He must also construct the wood-work for the post office washing-room in the cellar, and wood-work of the privies, building in the yard before mentioned.

The mahogany stair-rail will be 2¼ by 4 inches, wrought to pattern in best manner.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent. Centres. Casing stone work. Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings must be lathed, and plasted in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and also plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles in the ceiling, as represented on the drawing No. 7. Ceilings. Three coat work. Two coats on the brick walls. Granite finish. Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent. Jobbing.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work. Glazing

The number of lights, sizes, &c., as indicated on the drawings.

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Exterior iron-work. All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Inside iron-work. All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing. All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors. All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

Fresco. The painter must "fresco," in the best manner, the ceilings of the vestibules of the post office, custom-house, and court-rooms, and the ceilings, and so much of the walls of the custom-house, and court-rooms, as may be required of him. He must paint the wood-work of the privies in a proper manner and glaze the windows.

PLUMBER'S WORK.

Reservoirs. The reservoirs, over the water-closets, must be lined in the most perfect manner, with best eight-pound milled lead.

Force pump. There must be a *forcing* pump, of best kind, and construction, for supplying the water-closet cisterns, &c., with water from the cisterns on the premises.

Water-closets. The plumber must construct (with the exception of their carpenter's work) the four (4) water-closets mentioned in the former part of these specifications, and as shown on the plans, with all their fixtures complete, including supply, soil, and waste pipes, bowls, traps, basins, and urine-sinks, with their supply, and waste pipes, &c.; and also the necessary cistern bowls, basins, pipes, &c., for the post office wash-room in the cellar.

The soil pipes must be made of best eight-pound milled lead, and lead into the drains; and all the other pipes must be of the best, and heaviest kind, and fully equal to the greatest pressure ever to be put upon them. The plumber must secure the whole apparatus from the frost, and be responsible for any defect in their operations; furnish all the materials, of the best quality, and do and perform all the plumber's work, jobbing, &c., upon the building, to the satisfaction, and acceptance of the superintendent

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GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials which may not have been set forth in these specifications must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, May 14, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AT

NEWARK, NEW JERSEY,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department,
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AT NEWARK, N. J.,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for erecting a new custom-house, at Newark N. J., including accommodations for a post office, and United States court room, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations, cellar, and entrance story.
2. Plans of second and third stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Drawing and details of roof.
6. " " " exterior.
7. " " " interior.
8. " " " windows and doors.
9. " " " miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Broad street, its front line being ten (10) feet from said street, and its east end ten (10) feet from Academy street. The entrance story floor will be five (5) feet above the inside line of the sidewalk at the intersection of said streets. The premises must have a proper grade up to the building from the sidewalk; and the steps and underprinning of the building must be made to conform to said grade—the first in their number, and the last in its height, instead of (in that respect) conforming to the drawings. The steps, at the east end, must also have suitable iron hand-rails and balusters, if required.

Cellar window sky-lights.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending

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Covering. from the top of the side-walk or paving down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curb-stone which must surround them, and be there properly secured.

Area walls. The walls of these areas will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas

Paving of area. must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of side-walk. The side-walks of the two streets, and the ten feet space thence to the building from them, must be paved either with the best hard paving brick, or stone flagging, laid to a curb-stone of the best material and form to be obtained in the vicinity.

Cellar, its brick partition wall. A brick wall will divide the post office packing-room from the fuel and furnace room, the post office wash-room and the water-closet room, in the cellar, and iron stairways must come down from the entrance story into each of the last two rooms.

Cellar walls. The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully

Window and door jambs. secured against any settlement. The window, and door jambs, and heads in the cellar wall, must be rough-hammered, and rebated to receive the window frames, and sashes, and the doors, or doors and frames, as may be

Size of stone. found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Stone-work. The entire exterior of the building will be faced with the most durable stone to be obtained in the vicinity, including the door and window dressings, the belt courses, cornice, &c. The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds and builds full to the square, and perfect, and the whole to be left clean, and perfect, on the completion of the building.

Outside doors, window frames, &c. The outside doors, and the bead of the window frames, and the window shutters and their frames, must be of iron.

Floors. The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned

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from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon stone foundations below the cellar paving, must extend up through the cellar and the several stories, and support their floors, and ceilings. Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue. Ventilating flues.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work. Insert wooden blocks.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside door-sills to all the cellar doors. Cellar floor.

The entrance hall, and vestibule to the post office, in the first story, the vestibules and entrance to the custom-house and rooms, in the second story, and the vestibules and passages to the court room and its offices, in the third and half stories, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, (agreeably to the municipal laws and regulations of the city of Newark) through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged. Sewer.

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which the soil from the water-closets, &c., and the waste water from the premises, can be discharged.

Drains. Drains must be constructed, leading from the eave conductors, and soil pipes of the water-closets, and sinks, to the above sewer, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations be constructed in connexion with them, and fully secured against frost.

Interior hollow walls. All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Half stories at rear end. The upper story, at the east end, must be divided into two stories by the insertion of an intermediate flooring, shown only on the longitudinal section, and the upper one fully lighted and ventilated by sky-lights on roof, not shown on the drawings. The plan and finish of the upper rooms must be similar to those under them, as shown on drawing No. 4.

Stairs. The stairways, to the building, must be of *wrought* and *cast* iron-work, with a mahogany hand-rail, in two flights, extending from the entrance story to the upper, and upper half story, From the upper half story to the roof, there must be constructed an enclosed flight of stairs, three (3) feet wide, with small iron hand-rail, as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron hand-rail.

Water-closets. There must be six (6) water-closets in the cellar, two (2) in the third-story and two others over them; all of which must be furnished with proper and necessary spring seats, bowls, traps, urine sinks, &c., complete; also with tanks, and cisterns, capable of holding, on an average, two hundred (200) gallons of water, to each closet, placed immediately over them, and receiving their supplies from the city water-works. All their main and supply pipes, &c., must be inserted in the brick-work as it goes up, and be fully secured against the action of the frost, and a channel left to receive the soil pipe, which, when put in, must also be fully guarded and secured against the action of the frost.

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At the rear side, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* (½) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost. Cast iro conduc serted i walls to apparatu

There must also be another water conductor, *three* (3) inches in diameter, from the eaves to the cisterns of the water-closets in the upper stories, for use in warm weather, with the necessary apparatus to close it during cold weather. Another condu tor from eaves water-closets.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead. Eave pipes, elbows, &c.

A proper main water pipe must be put in, connecting with the main pipe of the city water-works, and terminating and connecting with proper supply pipes extending to the several water-closet cisterns, and all other parts of the building when they are required; and, should it be necessary, an approved forcing pump, of a sufficient power, and capacity to, properly, distribute the water, as above, placed, and secured at the junction of the main and supply pipes, which should be situated in the most convenient location on the premises. Supply Force

DIGGING, GRADING, &c.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent. Excav

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed. Ren and

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Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, properly sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Stone. The bidder, if necessary, to furnish to the Treasury Department a sample of the stone which he proposes to put into the exterior of the building. It must be a *cube* of six (6) inches square on each face, and five of its six faces wrought in the several manners of working the stone in the vicinity, and the sixth face left as a split, rough surface, with half of an inch at each edge, tooled or chiselled straight and true.

Dressing.

Manner of laying. All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Thickness of ashlar. Three-quarters of the ashlar of the first story must be fourteen (14) inches thick from its face, and the other quarter, as headers and binders, from eighteen (18) to twenty (20) inches thick. In the second story, the rustic corners must be from thirteen (13) to seventeen (17) inches thick from their face; three-quarters of the remainder of the ashlar must be ten (10) inches thick, and one-fourth, as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the third story, the rustic corners must be from twelve (12) to sixteen (16) inches thick from their face; three-fourths of the remainder of the ashlar nine (9) inches, and the residue, as headers and binders, from thirteen (13) to seventeen (17) inches thick.

Doorway piers. The piers, of the doorways, provided they can be so obtained, must be in three blocks, the *base* being one, the *shaft* another, and the *capital* the third. The stones, composing the window, and door dressings, the *belt courses*, and cornice, must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places. All the stone must be

Bed of stone to corner, &c.

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properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and imbedded in the stone, and secured with brimstone, in the best manner, by the mason. Cramped and anchored.

All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them. Backing. Solid at bearings. Wall plates.

The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $30 each, exclusive of their setting, and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long. Fireplaces. Grates. Hearths.

There must be constructed in the cellar one or two furnaces, (as may be thought best,) of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ, chimney, &c. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15; and in the half-story, 2 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent Heating apparatus. Hot air registers.

Suitable coal-slides, to lead to the cellar, must be constructed, with proper covers, &c. Coal slides.

The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason's work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the Jobbing.

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IRON-WORK.

Beams and girders.

There will be furnished by the Treasury Department, wrought iron *beams* and *girders*, for the floors, ceilings, and roof, together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Newark, by the Department, and, by the contractor, taken thence, and put into the building.

To furnish all other iron-work.

The iron-worker must furnish all the other iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished.

Antæ.

There will be in the cellar twelve (12) round columns, sixteen (16) inches at their base, and fourteen (14) at their necks, and three-fourths ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10) square antæ; in the second story, eight (8), and four (4) in the third story, twelve (12) inches square and three-quarters ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10) round

Columns.

columns, and in the third, four (4), fourteen (14) inches diameter at their bases and twelve (12) inches at their necks. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

Window.

The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, or to the stone jambs, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 8.)

Antæ cast true.

The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways.

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought and cast iron, in two flights, from the entrance to the third story, and one flight, from the third to the half story above. From the end of the passage in this half-story, he must construct a flight of stairs, (not shown on the, lithograph drawing, plans,) 3 feet wide, to the attic floor, and from thence to the scut-

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tle on the roof, by which it may be approached for any purpose. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly moulded balusters secured to the steps by nuts, and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawing No. 9.)

Galvanized iron roof, gutters, &c.

He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have proper sky-lights inserted in it to properly light and ventilate the half-story at the east end; and it must also have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawing No. 5. He must also furnish and set in place, cast iron thresholds to all the interior doors.

Thresholds.

Miscellaneous.

He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use. He must do, and perform all the blacksmith and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling.

The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames, must be first quality white, or spruce pine; and the stair-rails, and the newels, and rails of the court room, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors.

The floors of all the stories must be $\frac{6}{4}$ inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of black walnut, properly hung with weights, and securely and

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properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$ inch thick.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, with iron sash, and letter boxes between the iron antæ, with openings, &c., as per detail drawing No. 9, for delivery of letters, as the superintendent may direct.

Finish of custom-house room. The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. The walls of the court room must be panelled to the height of six (6) feet from the level of the floor of the bar; finished at the base with a skirting, and at the top with an impost moulding, as per detail drawing.

Finish of court room. The court room must be fitted with its railings, $2\frac{1}{4}$ by $3\frac{3}{4}$ inches, and newels 6 inches in diameter, and of proper heights; its judge's seat, desk, &c.; its clerk, and marshal's seat, desk, &c.; its dock, witnesses' stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat must be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectators' seats must rise three inches, at least, to each seat, as they retire from the bar.

Fly doors. There must be constructed fly doors to the court, and custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

Finish of water closets. He must construct all the wood-work, and carpenter's work of the water-closets, &c., the seats of which must be of mahogany, and the reservoirs, holding 200 gallons each, over each of the water-closets, to receive the water from the city water-works, for the use of the water-closets, must be made of 2-inch plank, milled, jointed, and matched, firmly and securely put together, and fully fitted to receive the lead lining to be put in by the plumber.

He must also construct the wood-work for the post office washing-room in the cellar.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

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He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

Centres.

Casing stone work.

Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture. All the rooms must have a moulding, in the angles in the ceiling, as represented on the drawing No. 7.

Ceilings. Three coat work.

Two coats on the brick walls. Granite finish.

Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent.

Jobbing.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

Glazing

The number of lights, sizes, &c., as indicated on the drawings.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Exterior iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Inside iron-work.

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Grained work

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Varnishing.

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Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

Fresco.

The painter must "fresco," in the best manner, the ceilings of the vestibules of the post office, custom-house, and court-rooms, and the ceilings, and so much of the walls of the custom-house, and court-rooms, as may be required of him.

PLUMBER'S WORK.

Reservoirs.

The reservoirs, over the water-closets, must be lined in the most perfect manner, with best eight-pound milled lead. If required, there must be, in a proper location, a

Force pump.

forcing pump, of best kind, and construction, for supplying the water-closet cisterns, &c., with water from the city water-works.

Water-closets.

The plumber must construct (with the exception of their carpenter's work) ten (10) water-closets, mentioned in the former part of these specifications, and as shown on the plans, with all their fixtures complete, including supply, soil, and waste pipes, bowls, traps, basins, and urine-sinks, with their supply, and waste pipes, &c.; and also the necessary cistern bowls, basins, pipes, &c., for the post office wash-room in the cellar.

The soil-pipes must be made of best eight-pound milled lead, and lead into the drains; and all the other pipes must be of the best, and heaviest kind, and fully equal to the greatest pressure ever to be put upon them. The plumber must secure the whole apparatus from the frost, and be responsible for any defect in their operations; furnish all the materials, of the best quality, and do and perform all the plumber's work, jobbing, &c., upon the building, to the satisfaction, and acceptance of the superintendent.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing

Work and material not specified.

specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

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Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

To be done under superintendent.

Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, June 5, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AT

OSWEGO, NEW YORK,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department,
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AT CHICAGO, ILLINOIS,

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for erecting a new custom-house, at Chicago, Illinois, including accommodations for a Post Office, and United States court room, which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations, cellar, and entrance story.
2. Plans of second and third stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Drawing and details of roof.
6. Do do do exterior.
7. Do do do interior.
8. Do do do windows and doors.
9. Do do do miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Munroe street, its front line being twelve (12) feet from said street, and its east end fifteen (15) feet from Dearborn street. The entrance story floor will be four feet and six inches above the inside line of the sidewalk of the premises, at the intersection of said streets. The premises, on the south and east of the building, must have a proper grade up to the building from the sidewalk; and the steps and underpinning of the building must be made to conform to said grade—the first in their number, and the last in its height, instead of (in

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that respect) conforming to the drawings. The steps, at the east end must also have suitable iron hand-rails and balisters, if required.

Cellar-window sky-lights.

On the sides, and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the sidewalk down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in to a suitable curbstone which must surround them, and be there properly secured.

Covering

Area walls.

The walls of these areas will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalks of the two streets, and the approaches to the building from them, must be paved either with the best hard-paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar, its brick partition wall.

A brick wall will divide the post office packing-room from the post office wash-room, and the fuel and furnace room in the cellar, and iron stairways, must come down from the entrance story into each of the two last rooms.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window, and door jambs, and heads in the cellar wall, must be rough-hammered, and rebated to receive the window frames, and sashes, and the doors, or doors and frames, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Window and door jambs.

Size of stone.

Stone-work.

The entire exterior of the building will be faced with the most durable stone to be obtained in the vicinity, including the door and window dressings, the belt courses, cornice, &c. The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

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Floors.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon stone foundations below the cellar paving, must extend up through the cellar and the several stories, and support their floors, and ceilings.

Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

Ventilating flues.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue.

Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside door-sills to all the cellar doors.

The entrance hall, and vestibule to the post office, in the first story, the vestibules and entrance to the custom-house, and rooms, in the second story, and the vestibules, and passages to the court-rooms and its offices, in the third, and half stories, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Sewer.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, (agreeably to the muni-

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Sewer.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, (agreeably to the municipal laws, and regulations of the city of Oswego) through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged.

Drains.

Drains must be constructed, leading from the eave conductors and soil pipes of the water-closets, and sinks to the above sewer, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations be constructed in connexion with them, and fully secured against frost.

Interior hollow walls.

All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work a the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place; and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do, and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Half stories at rear end.

The upper story, at the west end, must be divided into two stories by the insertion of an intermediate flooring, shown only on the longitudinal section, (No. 4.) The plan, and finish of the upper rooms must be similar to those under them, as shown on drawing No. 4.

Stairs.

The stairways, to the building, must be of *wrought*, and *cast* iron-work, with a mahogany hand-rail, in two flights, extending from the entrance story to the upper, and upper half story. From the upper half story to the attic, and from that to the roof, there must be constructed a flight of stairs, three (3) feet wide, with small iron hand-rail, as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron hand-rail.

Water-closets.

There must be two (2) water-closets in the third-story and two others over them; all of which must be furnished with proper and necessary spring seats, bowls, traps, urine-sinks, &c., complete; also with tanks, and cisterns, capable of holding, on an average, two hundred (200) gallons of water, to each closet, placed immediately over them, and receiving their supplies from the roof, or from the well well on the premises, when the roof does not furnish the necessary quanties. All their main and supply pipes, &c., must be inserted in the brick-work as it goes up, and be

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ully secured against the action of the frost, and a chan-
el left to receive the soil pipe, which, when put in, must
lso be fully guarded and secured against the action of
he frost.

Cast iron eave conductors inserted in outside walls to filtering apparatus.

At the rear end, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* (½) an nch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

Another conductor from eaves to water-closets.

There must also be another water conductor, *three* (3) inches in diameter, from the eaves to the cisterns of the water-closets in the upper stories, for use in warm weather, with the necessary apparatus to close it during cold weather.

Eave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

Supply pipes.

From the city water works, proper supply pipes must be extended to all parts of the building, and if required, a suitable, and approved forcing pump, of a sufficient power, and capacity to, properly, distribute the water, as above, placed, and secured in the most convenient location on the premises.

Force pump.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 10 divisions, 3 by 4½ feet, with a passage in front of them 3½ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the fonndation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and, but the exterior, filled, with proper earth, up to the proper grade line of the premises as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading must be carted away; and all the rubbish that

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may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets, and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Stone.

The bidder must furnish to the Treasury Department a sample of the stone which he proposes to put into the exterior of the building. It must be a *cube* of six (6) inches square on each face, and five of its six faces wrought in the several manners of working the stone in the vicinity, and the sixth face left as a split, rough surface, with half of an inch at each edge, tooled or chisselled straight and true.

Dressing.

Manner of laying.

All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Thickness of ashlar.

Three-quarters of the ashlar of the first story must be fourteen (14) inches thick from its face, and the other quarter, as headers and binders, from eighteen (18) to twenty (20) inches thick. In the second story, the rustic corners must be from thirteen (13) to seventeen (17) inches thick from their face; three-quarters of the remainder of the ashlar must be ten (10) inches thick, and one-fourth, as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the third story, the rustic corners must be from twelve (12) to sixteen (16) inches thick from their face; three-fourths of the remainder of the ashlar nine (9) inches, and the residue, as headers and binders, from thirteen (13) to seventeen (17) inches thick.

way piers.

The piers, of the doorways, must be in three blocks, the

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base being one, the *shaft* another, and the *capital* the third. The stones, composing the window, and door dressings, the *belt courses*, and cornice, must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places. Bed of stone fo corner, &c.

All the stone must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason. Cramped and anchored.

All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. Backing.

Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them. Solid at bearings. Wall plates.

The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $30 each exclusive of their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace. The hearths must be best qualty, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long. Fireplaces. Grates. Hearths.

There must be constructed in the cellar one or two furnaces, (as may be thought best,) of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ, chimney, &c. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15; and in the half-story, 2 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent. Heating apparatus. Hot-air registers

Suitable coal-slides, to lead to the cellar, must be constructed from the sidewalks, with proper covers, &c. Coal slides.

The mason must give the price, per thousand, for laying any extra brick-work required. Extra brick-work.

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The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings,

Jobbing. do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

IRON-WORK.

Antæ. There will be in the cellar twelve (12) round columns, sixteen (16) inches at their base, and fourteen (14) at their necks, and three-fourths ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10) square antæ; in the second story, eight (8), and four (4) in the third story, twelve (12) inches square and three-quarters ($\frac{3}{4}$) of an inch thick. In the entrance story there will be ten (10)

Columns. round columns, and in the third four (4), fourteen (14) inches diameter at their bases and twelve (12) inches at their necks. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

Beams and girders. There will be furnished by the Treasury Department the following wrought iron *beams* and *girders*, for the floors and ceilings, viz:

18	girders	18	feet	6	inches	long, 16	inches deep.
24	"	15	"	0	"	16	"
144	beams	20	"	9	"	shape of	drawing.
62	"	15	"	0	"	"	

together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail Chicago, They will be delivered, upon a suitable wharf, at Milwaukee, by the Department, and, by the contractor, taken thence, and put into the building.

Window. The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, or to the stone jambs, as shewn on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 8.)

To furnish all iron-work. The iron-worker must furnish, to the mason, as he may need it for use, all the iron-work mentioned, in the former part of these specifications, as to be furnished by the iron-worker, and the mason, or bricklayer must insert the same in the building, as it progresses.

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ girders, beams, window frames, &c.,

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must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought, and cast iron, in two flights, from the entrance to the third story, and one flight, from the third to the half story above. From the end of the passage in this half-story, he must construct a flight of stairs, (not shown on the, lithograph drawing, plans,) 3 feet wide, to the attic floor, and from thence to the scuttle on the roof, by which it may be approached for any purpose. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawing No. 9.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawing No. 5. He must also furnish, and set in place, cast iron thresholds to all the interior doors.

Thresholds.

Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do, and perform all the blacksmith and iron-worker's jobbing on the buildings, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard-pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames must be first quality white, or spruce pine; and the stair-rails, and the newels, and rails of the court room, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors. The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, pointed, and matched, not over 6 inches wide, laid on

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scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of black walnut, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have 7-inch best mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$ inch thick.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, with iron sash, and letter boxes between the iron antæ, with openings, &c., as per detail drawing No. 9, for delivery of letters, as the superintendent may direct.

Finish of custom house room. The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. The walls of the court room must be panelled to the height of six (6) feet from the level of the floor of the bar; finished at the base with a skirting, and at the top with an impost moulding, as per detail drawing.

Finish of court room. The court room must be fitted with its railings, $2\frac{1}{4}$ by $3\frac{3}{4}$ inches, and newels 6 inches in diameter, and of proper heights; its judge's seat, desk, &c.; its clerk, and marshal's seat, desk, &c.; its dock, witness stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat must be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectator's seats must rise three inches, at least, to each seat, as they retire from the bar.

Fly doors. There must be constructed fly doors to the court, and custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

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He must construct all the wood-work, and carpenter's work of the water-closets, &c., the seats of which must be of mahogany, and the reservoirs, holding 200 gallons each over each of the water-closets, to receive the water from the roof or cisterns in the yard, for the use of the water-closets, and other purposes, must be made of 2-inch plank, milled, jointed, and matched, firmly, and securely put together, and fully fitted to receive the lead lining to be put in by the plumber. Finish of water closets.

He must also construct the wood work for the post office washing-room in the cellar, and the wood work of the privies' building in the yard heretofore mentioned.

The mahogany stair rail will be 2¼ by 4 inches, wrought to pattern in best manner.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the buildings, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent. Centres. Casing stone-work. Jobbing.

PLASTERING, STUCCO-WORK, ETC.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawing No. 7. Ceilings. Three coat work. Two coats on the brick walls. Granite finish. Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner to the acceptance of the superintendent. Jobbing.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work. Glazing

The number of lights, sizes, &c., as indicated on the drawings.

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Exterior iron-work. All the exterior iron-work of the building must b painted four coats of best quality New Jersey zinc paint sanded in two coats, except roof, and finished in imitation o granite.

Inside iron-work. All the interior iron-work must have four coats of th above zinc paint, finished in imitation of bronze, or other wise, as may be directed, and have two coats of varnish

Grained work. All the wood-work, except the floors and mahogan work, usually painted in such buildings, must be painte three coats pure white lead, properly toned, and pure lin seed oil, and grained in oil colors in imitation of woods, o marble, as may be directed by the superintendent.

Varnishing. All the graining must have two coats of best copal var nish, and the mahogany-work, coats sufficient to give i proper body, and be polished in the best manner.

Oiling and var nishing floors. All the floors must be oiled in the most thorough man ner, and, if thought necessary, varnished with one coat.

Fresco. The painter must "fresco," in the best manner, the ceilings of the vestibules of the post office, custom-house and court-rooms, and the ceilings, and so much of the walls of the custom-house, and court-rooms as may be required of him. He must also paint the wood-work of the privies in a proper manner, and glaze the windows.

PLUMBER'S WORK.

Reservoirs. The reservoirs, over the water-closets, must be lined in the most perfect manner, with best eight-pound milled

Force pump. lead. In the cellar must be a *forcing* pump, of best kind, and construction, for supplying the water-closet cisterns with water from the well on the premises.

Water-closets. The plumber must construct (with the exception of their carpenter's work) the four (4) water closets mentioned in the former part of these specifications, and as shown on the plans, with all their fixtures complete, including supply, soil, and waste pipes, bowls, traps, basins, and urine-sinks, with their supply, and waste pipes, &c; and also the necessary cistern bowls, basins, pipes, &c., for the post office wash-room in the cellar.

The soil pipes must be made of best eight-pound milled lead, and lead into the drains; and all the other pipes must be of the best, and heaviest kind, and fully equal to the greatest pressure ever to be put upon them. The plumber must secure the whole apparatus from the frost, and be responsible for any defect in their operations; furnish all the materials, of the best quality, and do and perform all the plumber's work, jobbing, &c., upon the building, to the satisfaction, and acceptance of the superintendent.

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GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, April 5, 1855.

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SPECIFICATIONS

FOR

BUILDING THE MARINE HOSPITAL

AT

DETROIT, MICHIGAN.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE MARINE HOSPITAL

AT

DETROIT, MICHIGAN.

Specifications for erecting a marine hospital at Detroit, Michigan, which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury, for that purpose,) according to the following enumerated drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plan of the foundations.
2. " " cellar.
3. " " entrance story.
4. " " second story.
5. " " third story.
6. Front elevation.
7. Side elevation.
8. Transverse section.
9. Details of iron work, &c., of exterior.
10. " interior, finish, &c.
11. " roof, stairs, &c.

All the measurements are in English feet and inches.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will be located at from 450 to 500 feet from Jefferson avenue, and nearly midway between the northeasterly and southwesterly lines of the premises, and fronting upon said avenue, but approached from the public passage of 33 feet on the northeasterly side of the lot.

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The grade or ground line of the site, at the walls of the building, must be at least two feet above the highest surface of the ground at forty feet distant from it in any direction, and be graded up to said line with proper slopes, or with offsetts if required; the location and grade of the grounds are, however, to be subject to such change or modification as the Department may find it necessary to make at the commencement of the work.

Area walls. Under the verandas at the northeast side and rear of the building will be a sunk area, extending from the rear of the front part around to the southwest side of the water-closets at the extreme rear of the building, with stone steps leading up to the grade or ground line at the southeast corner; the walls of this area will be rubble-stone masonry, eighteen (18) inches thick, resting on a foundation twenty-four (24) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the necessary curbstones, fourteen (14) inches wide and eight (8) inches deep, as a capping thereof in a proper manner. The bottom of the area must be paved with brick, and be provided with a small drain to discharge into the common sewer, or general drain from the building, any water that may fall into it.

There will also be areas or skylights to twelve of the cellar windows, extending from the top of the ground down to the bottom of their sills; their walls, similar to those of the principal area, but only 12 inches thick, and capped with a curb-stone 12 by 8 inches; they must each be paved with brick, and have a small drain to discharge outside of the walls into the ground any water that may fall into them.

Cellar walls. The exterior cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully

Window jambs. secured against any settlement. The window jambs, and heads in the cellar wall, must be rough-hammered to receive the window frames and sashes, as may be

Size of stone. found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Cellar walls. The interior cellar walls will be of brick-work of hard-burned brick, laid in hydraulic cement and sand mortar. The exterior cellar walls are to be carried up to within 3 inches of the ground line, the thickness marked on the drawings. At three inches below the ground line the cel-

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lar walls are to be finished with a course of Welch slate, properly over-lapped and bedded, to prevent the ascent of moisture through the walls, and properly to receive the brick-work of the superstructure. The brick piers and interior cellar walls are to be carried up with the other walls. The foundations of the front steps and piers of the verandas can be put in to suit the convenience of the contractor.

Foundations of front steps, &c.

The underpinning of the whole building, (except what is covered by the verandas,) the rusticated corners, the belt course of the entrance story, the door steps, the outside door thresholds, the piers of the three verandas, the area curbs, the outside door caps, the widow sills and caps, are to be of the best quality of stone found in the vicinity, properly wrought and laid in hydraulic cement and sand mortar, in the most perfect and workmanlike manner, agreeably to the working drawings, with all the joints properly pointed, and also leaded where necessary. The outside door sills will project 1½ inch outside, and 3 inches inside of wall; they will be 4 inches longer than the width of the opening, and 8 inches thick; the caps will be 8 inches longer than the width of the opening, 8 inches thick, the height of 5 courses of brick in width, and project ¾ of an inch from the face of the brick-work at their ends. The area curbs are to be 8 by 14 inches, and of their proper lengths, as per plans. The window sills will be 3 inches longer than the width of the openings, 6 inches thick, and 7 inches wide; the caps 8 inches longer than the width of the opening, 5 to 7 inches thick, and the height of 4 courses of brick-work in width.

Door caps and sills.

Window caps and sills.

The veranda piers will be 24 by 16 inches square, and 4 feet 3 inches high.

Verandas.

The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

Stone-work.

The exterior of the building, above the underpinning, including the cornice, will be constructed with best quality of brick-work, the outside facing being of pressed-face brick.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the walls, the whole covered with hard pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with

Floors.

Ceiling of upper story.

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"asphalt," to carry off any water that may percolate through the iron covering of the roof.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood.

Ventilating flues. A flue, for ventilation, is to be made from each room throughout the building, with an opening into it at the top and bottom of said rooms, furnished with an Arnott's ventilating register to each opening; they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, or open out in rear of the piers of the balustrade, as may be directed.

Insert wooden blocks. Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor. The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner.

Drains. Drains must be constructed, leading from the eave conductors to the river, as the superintendent may direct, to carry off the waste water from the premises. The main or principal part laid so low, and with such descent, that it will take the waste water from the sunk area, and the soil from the water-closets. The partitions on each side of the halls supporting the iron beams, will be 12-inch hollow walls above the cellar, but solid in the cellar, and four courses under each beam of two bricks, or 16 inches wide. On one side of the "passages" the wall will be two feet thick, to receive the smoke and hot air flues, and made hollow when they can be so without injury to their stability; on the other side of the "passages," the walls will be 10-inch hollow walls, with 12-inch solid walls in the cellar under them. The walls between the main body of the building and the wings, on the sides of the chimneys, will be 10-inch hollow walls, except where the dumb-waiters go up where they will be solid, and only four inches thick. The thin partitions of the wings will be studed, lathed, and plastered.

Interior hollow walls.

On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's

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trade, to put the same into its place; and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do, and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Stairs.

The stairways of the building, must be of *wrought*, and *cast* iron-work, having a mahogany hand-rail, extending from the entrance to the upper story, and around the well holes therein; the cellar stairs must have a proper sized iron-hand rail. There will also be a step ladder of wrought iron, to ascend from the upper story to the roof through a scuttle therein.

Cast iron eave conductors inserted in outside walls.

At the rear side of front part, near the corners of the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; there must also be inserted another of the same size at the rear end, leading by the cisterns of the water-closets down to the drain, and so arranged that the water may at any time be discharged into said cisterns, or let to run down the conductor, as may be necessary for the time being; these pipes must be fully secured against the action of frost.

Eave pipes, elbows, &c.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foandation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and, on the exterior, filled, with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be

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carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets, and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar. The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick. The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Stones cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing. All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by headers, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and where the iron beams rets upon the walls, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Solid at bearings.

Wall plates.

Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, to be worth $25 each, exclusive of their setting; and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Grates.

Hearths. The hearths must be best quality, fire-proof, stone for the

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purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

There must be constructed in the cellar two furnaces, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the chimneys and walls. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, there will be 7 hot-air registers 15 by 19 inches, and 2 ditto 11 by 15 inches; and in each of the stories above, 6 ditto 11 by 15 inches, and 4, 9½ by 13½ inches—making 29 of them in the whole building: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent. Heating apparatus. Hot-air registers.

The mason must give the price, per thousand, for laying any extra brick-work required. Extra brick work.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason's work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

There will be furnished by the Treasury Department the following wrought iron *beams* and girders for the floors and ceilings, viz: Beams and girders.

4 girders 11 feet long, 12 inches deep.
60 beams 23½ " shape of drawing.
56 " 19 " " "
32 " 9 feet 10 inches long,

together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Detroit, by the Department, and, by the contractor, taken thence, and put into the building.

To furnish all the iron-work of the building, except the above, as it is wanted for use, of the best quality of material and workmanship, as per drawings: it consists of wrought and cast iron-work for the two verandas, the entire

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roof, wall-plates for beams, &c.; to render such assistance to the mason, in putting up what is to be inserted into the brick and stone-work, as pertains to the blacksmith and iron-worker; and also the same to the carpenter on his part of the work, furnishing all the necessary dowels, cramps, ties, bars, truss-rods, bolts, stirrups, and all other iron-work necessary to give permanency and stability to the building, of the best American iron, and as they may be wanted for use; and any delay from want of delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished.

Miscellaneous.

To furnish all iron-work.

The iron-worker must furnish, to the mason, as he may need it for use, all the iron-work mentioned, in the former part of these specifications, as to be furnished by the iron-worker, and the mason, or bricklayer must insert the same in the building, as it progresses.

Stairways.

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought, and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawings.)

Galvanized iron roof, gutters, &c.

He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawings. He must also furnish,

Thresholds.

and set in place, cast iron thresholds to all the interior doors.

Miscellaneous.

He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do,

Jobbing.

and perform all the blacksmith and iron-worker's jobbing on the buildings, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly sea-

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soned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames must be first quality white, or spruce pine; and the stair-rails, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors. The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred. and properly prepared, for lathing and plastering.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

Window frames. The window frames and sash must be constructed for, and furnished with, weights, sash pullies, lines, sash fastenings, &c., complete, of the best quality.

Finish. The finish of the inside face and jamb will be a $1\frac{3}{4}$-inch corner bead, running around the opening, and resting on a wooden stool, the bead and stool forming the whole of the inside finish to the window, the space between the bead and window frame being plastered, as shown by the drawings; the pulley stiles must be hard pine.

Size of glass, &c. There will be 7 windows in the cellar, of three lights, of 11 by 14 glass, 15 ditto, 12 lights, 11 by 14 glass, and two side lights, of 4 lights, 11 by 14 glass. In the entrance story there will be 24 windows, 12 lights, 11 by 18 glass, and 4 side lights, 4 lights, 11 by 18 glass, also lights over two other doors; there will be the same number of windows, side lights, and lights over doors in each of the other stories that there is in the entrance story, and of the same number and size of lights of glass. In the water-closets at the rear end of the building, there will be 2 windows of 2 lights, 11 by 14 glass, and 6 ditto, 4 lights, 11 by 14 glass, and also casements over all the swinging inside doors.

Doors. All the swinging inside doors will be $\frac{7}{4}$-inch thick, 6 panels, moulded and finished throughout, as per drawings; those in the centre part, 3 feet 4 inches by 8 feet; those in the wings, 2 feet 10 inches by 8 feet: all with a swinging casement over them for light and ventilation 2 feet high, properly glazed, hung, and fastened.

Casing. The casings and architraves will be as per drawing, viz: jamb

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and face casing and moulding on one side, and simply a corner bead on the other side.

The outside doors will be the width and height represented on the drawing.

Each of the above inside doors will be hung with 3 best cast iron butt hinges, 4 by 4 inches, with 1¾-inch screws, and have a 7-inch mortice lock, porcelain knobs, and bronzed trimmings, all of the best kind and quality.

Each of the outside doors will be hung with 3 best cast iron butt hinges, 4½ by 4½ inches, with 1¾-inch screws, and have a 7-inch mortice outside-door lock, porcelain knobs, and bronzed trimmings, all of the best kind and quality. There will be one set of slide doors in the interior, 10 feet wide, 10 feet high, and two inches thick; each door 6 panelled, moulded, &c., similar to the other doors; they will be fitted up with proper rollers, roller-rods, &c., complete, and the usual locks, fastening, &c., of the best kind and quality.

All the partitions in the two wings of the building will be constructed of 2 by 5-inch studding, the studs to be 12 inches from centre to centre, properly framed, trussed, and bridged complete.

The necessary wood-work of the water-closets, bathing room, dispensary, medicine room, wash room, kitchen, &c., is to be executed as may be directed.

Skirting 8 inches wide, with a two-inch moulding on its upper edge, is to be put around all the rooms over the plastering.

The carpenter will do all the furring of the ceilings required, and properly prepare the whole building for plastering, put on all grounds, casings, &c., needed.

Centres. **Casing stone work.** He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and **Jobbing.** joiner's work on the buildings, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

PLASTERING, STUCCO-WORK, ETC.

Ceilings. **Three coat work.** All the ceilings and studed partitions must be lathed, and plastered in three coats, the ceilings finished in stucco,

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and the walls with hard finish; all the brick walls of the three stories, all the walls of the water-closets, and the walls of the passages, corridor, entry, servant's lodging room, laundry, and wash room, in the cellar, must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture. Two coats on the brick walls. Granite finish.

All the rooms, halls, &c., in the entrance story, except the kitchen, pantries, and store closets, are to have a cornice moulding around them, to girt 15 inches.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner to the acceptance of the superintendent. Jobbing.

PLUMBING.

The reservoirs over the water-closets must be constructed to hold at least 200 gallons, and are to be lined in the most perfect manner with best eight-pound milled sheet lead. Reservoir lining.

All supply, soil, and waste pipes, must be laid into the brick-work as it goes up, and made proof against frost.

In the cellar must be a forcing pump of best kind and construction, for supplying the cisterns of the water-closets and bathing-room with water, for which there must be laid the necessary main, of suitable size, fully secured against frost. Forcing pump.

To construct ten water-closets, as shown on the plans, with all their fixtures complete, including bowls, supply, soil, and waste pipes, traps, basins, urine sinks, with their waste and supply pipes, &c., &c. Water-closets.

The soil pipes to be made of the best milled eight-pound lead, leading into the main drain. To do and perform all the work, jobbing, &c., of the best materials, to the satisfaction of the superintendent. Soil pipes.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work. Glazing

The number of lights, sizes, &c., as indicated on the drawings.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite. Exterior iron-work.

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Inside iron-work. All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work. All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing. All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors. All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

GENERAL CONDITIONS.

Manner of executing the work. All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent. Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills

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of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, April 30, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AT

PENSACOLA, FLORIDA,

INCLUDING

ACCOMMODATIONS FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AT PENSACOLA, FLA.,

INCLUDING

ACCOMMODATIONS FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for erecting a new custom-house, at Pensacola, Fla., including accommodations for a post office, and United States court room, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of first and second stories.
2. Front and end elevations.
3. Longitudinal and transverse sections.
4. Details of roof, &c.
5. " exterior, interior, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Palifox street, its front line being fifteen (15) feet from said street, and its south end twenty (20) feet from Government street. The entrance story floor will be three (3) feet above the sidewalk at the southeast corner of the lot.

The premises on the east and south of the building must have a proper grade from the sidewalks up to the steps, of the building, to conform to the drawings; and on the north and west of the building, the lot must be properly graded from the ground line of steps on the drawings in each direction from the building.

Foundation, &c.

The foundations of the building will be of brick-work laid in cement motar, also, the foundations of the gallery columns, steps, &c., which, in all cases, will be spread sufficiently to give proper support to whatever may come upon them.

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Proper openings must be left in the foundations, and in the risers of the gallery steps, to afford proper ventilation under the floors, and to exclude the vermin, proper iron gratings must be fitted to each opening.

The steps, and floors of the galleries will be of wood, secured to proper joist, foundation, &c.

Paving of sidewalk. The sidewalks of the streets, and the approaches to the building from it, must be paved either with the best hard paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

The exterior walls of the building, above the floor of the gallery, including the most of the cornice, will be constructed with best quality of brick-work, the outside facing being of selected face brick.

Iron-work. The columns and entablatures of the galleries, the shutters and shutter frames of the doors and windows, the window and door sills and part of the cornice of the building, must be of iron.

Floors. The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with hard pine flooring plank, or boards.

Ceiling of upper story. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon square foundations below the surface of the ground, must extend from said piers up through the stories, and support their floors and ceilings.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood.

Ventilating flues. A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue at its opening into the room.

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Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work. Insert wooden blocks.

Open gutters must be constructed, leading from the eave conductors to the street gutters, as the superintendent may direct, to carry off the waste water from the premises. Drains.

All the partitions in the building will be 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building. Interior hollow walls.

The stairways, of the building, must be of *wrought* and *cast* iron-work, having a mahogany handrail, extending from the entrance story to the floor of the half story, and around the well-hole therein. There will also be a step ladder of wrought iron, to ascend from the half story to the roof through a scuttle therein. Stairs.

At proper points in the building, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them. Cast iron eave conductors inserted in outside walls.

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead. Eave pipes, elbows &c.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 5 divisions, 3 by $4\frac{1}{2}$ feet, with a passage in front of them $3\frac{1}{2}$ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

The necessary excavation for putting in the foundation, walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent. Excavation.

The spaces on each side of the foundation walls must be filled in with proper earth, and thoroughly rammed throughout.

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Removing earth and rubbish.

All the surplus earth, and material, that may come out of the trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Solid at bearings.

All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by headers, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Wall plates.

Fireplaces.

Grates.

Hearths.

The fireplaces must be made with fire-brick, and have a marble mantel, (to be worth $20 each, exclusive of their setting,) and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Extra brick-work.

The mason must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the mason

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work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick and mason's work, required in completing this building or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

There will be furnished by the Treasury Department, wrought iron *beams* and *girders*, for the floors, ceilings, and roof, together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Pensacola, by the Department, and, by the contractor, taken thence, and put into the building. Beams and girders.

The iron-worker must furnish all the other iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished. To furnish all other iron-work.

There will be in the entrance story four (4) square antæ twelve (12) inches square and five-eighths ($\frac{5}{8}$) of an inch thick. In the second story there will be two (2) square antæ and two (2) round columns twelve (12) inches in diameter at their base, and ten (10) at their neck, of the same thickness as those in the entrance story. Antæ.

All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

The window and door shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, bolts, &c., complete. (See detail drawings.) Windows.

The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight. Antæ cast true.

The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought and cast iron, from the lower to the upper gallery floor, and from second story Stairways.

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floor to the floor of the half story above, with proper railing, &c. The steps and risers must be not less than $\frac{2}{3}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawings.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawings. He must also furnish and set in place, cast iron thresholds to all the interior doors.

Thresholds.

Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do, and perform all the blacksmith and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames, must be first quality white, or spruce pine; and the stair-rails, best quality of mahogany for the purpose.

Finishings.

Stair-rails.

Floors. The floors of all the stories must be $\frac{3}{4}$ inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

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The sash of the exterior of the building must be of white pine, properly hung, and securely and properly fastened. The sash for the interior must be of the same material, and such as require hinges and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors.

The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings.

Post office fittings.

That part of the entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawings.)

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

Centres.

Jobbing.

He must construct all the centres for the arches, trimmers, &c.; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

PLASTERING, STUCCO-WORK, ETC.

Ceilings.

Three coat work

Two coats on the brick walls.

Granite finish.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawings.

Cornice or angle moulds.

Jobbing.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent.

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PAINTING AND GLAZING.

Glazing

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of stone.

Inside iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under superintendent.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made

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for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party. Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, August 17, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

PETERSBURG, VIRGINIA.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

PETERSBURG, VIRGINIA.

Specifications for erecting a new custom-house and post office, at Petersburg, Va., which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations, cellar, entrance, and second stories.
2. Front and end elevations, and longitudinal and transverse sections
3. Drawing and details of roof, &c.
4. " " " exterior.
5. " " " interior.
6. " " " windows, doors, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Tabb street, its front line being forty (40) feet from said street, and its west side twenty (20) feet from Union street. The entrance story floor will be six (6) feet above the inside line of the sidewalk at the intersection of said streets. The premises must have a proper grade up to the building from the sidewalk; and the steps and underpinning of the building must conform to the drawings.

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Cellar window sky-lights.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the sidewalk or paving down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curbstone which must surround them, and be there properly secured.

Covering.

Area walls.

The walls of these areas will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalks of the two streets, together with 50 feet in width on the front, and three spaces, each 14 feet wide, at the west side, from the sidewalks to the building, must be paved either with the best hard paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar, its brick partition walls.

A brick wall will divide the storage cellar from the fuel and furnace cellar, and an iron stairway must come down from the entrance story into the last of these cellars.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window, and door jambs, and heads in the cellar wall, must be rough-hammered, and rebated to receive the window frames, and sashes, and the doors, or doors and frames, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Window and door jambs.

Size of stone.

Stone-work.

The entire exterior of the building will be faced with the most durable stone to be obtained in the vicinity, including the door and window dressings, the belt courses, cornice, &c. The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds and builds full to the square, and perfect, and the whole to be left clean, and perfect, on the completion of the building.

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The outside doors, and the bead of the widow frames, and the window shutters and their frames, must be of iron. Outside doors, window frames, &c.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards. Floors. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than five (5) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. Ceiling of upper story. The piers of the cellar must have suitable foundations laid below the cellar paving equal to sustaining the weight coming upon them, and suitable cast iron connecting pieces one inch thick in part forming the abaces of the capitals of the piers extending up to the bases and bottom of the columns and antæ of the entrance story which rests on them. These connecting pieces support the girders of the entrance story floor and have suitable openings in them to receive the hot-air pipes from the furnaces. There will be connecting pieces of cast iron, one inch thick, between the columns and antæ of the first and second stories which will support the girders ot the second story floor, and where necessary have suitable openings in them from which the hot air pipes can be brought out to the registers of each room. The girders of the ceiling of the upper story will rest immediately upon the capitals of the columns.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops. Ventilating flues. They must have an Arnott's ventilating register at their openings into the room, or some other equally appropriate register for the purpose, to each flue.

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Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with granite inside doorsills to all the cellar doors.

The entrance hall, and vestibule to the post office, in the first story, the vestibule and entrance to the custom-house and rooms, in the second story, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Sewer.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, or to the river, (agreeably to the municipal laws and regulations of the city of Petersburg,) through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged.

Drains.

Drains must be constructed, leading from the eave conductors, to the above sewer, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations be constructed in connexion with them, and fully secured against frost.

Interior hollow walls.

All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Stairs.

The stairways, to the building, must be of *wrought* and *cast* iron-work, with a mahogany handrail, in one flight, extending from the entrance to the upper story. From the upper story to the roof, there must be constructed a step ladder, to a scuttle in the roof, as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron handrail.

Leaders or conductors.

On the rear of the building, near the corners, there must be put up and secured in a proper manner, two suitable tinned copper leaders, or conductors, from the

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eaves to the forementioned drains, four inches square, to convey the water from the roof to them.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 6 divisions, 3 by 4½ feet, with a passage in front of them 3½ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner. Privies.

DIGGING, GRADING, &c.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent. Excavation.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed. Removing earth and rubbish.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean and sharp-gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp-gritted. Mortar.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

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Brick. The brick must all be of the best quality, firm in texture hard-burned, and laid in the most solid manner.

Stone. The bidder, if necessary, to furnish to the Treasury Department a sample of the stone which he proposes to put into the exterior of the building.

Dressing. It must be a *cube* of six (6) inches square on each face, and five of its six faces wrought in the several manners of working the stone in the vicinity, and the sixth face left as a split, rough surface, with half of an inch at each edge, tooled or chiselled straight and true.

Manner of laying. All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Thickness of ashlar. Three-quarters of the ashlar of the first story must be ten (10) inches thick, and one-fourth, as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the second story, three-four thsof the ashlar nine (9) inches, and the residue, as headers and binders, from thirteen (13) to seventeen (17) inches thick.

Doorway piers. The piers, of the doorways, provided they can be so obtained, must be in three blocks, the *base* being one, the *shaft* another, and the *capital* the third.

Bed of stone to cornice, &c The stones, composing the window, and door dressings, the *belt courses*, and cornice, must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places.

Cramped and anchored. All the stone must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and imbedded in the stone, and secured with brimstone, in the best manner by the mason.

Backing. All the stone-work must be backed up with brick-work in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks.

Solid at bearings. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall,

Wall plates. a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Fire places. The fireplaces must be made with fire-brick, and have a marble mantel, (to be worth $30 each, exclusive of their setting,) and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures,

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must be furnished, and properly set in each fireplace. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the base of the mantel, and five feet six inches long. Hearths.

There must be constructed in the cellar a furnace of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the columns, antæ, chimney, &c. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, 2 hot-air registers 15 by 19 inches, and 2 ditto 11 by 15 inches; in the second story, 2 ditto 15 by 19 inches, and 2 ditto 11 by 15 inches: all which must be inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent. Heating apparatus. Hot-air registers. Wall courses.

Suitable coal-slides, to lead to the cellar, must be constructed, with the proper covers, &c. Coal slides.

The masons must give the price, per thousand, for laying any extra brick-work required. Extra brick-work.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason's work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

The beams and girders in floors and ceilings of the building are represented fully upon the drawings, with a bill of the same. Beams and girders.

The Treasury Department have purchased the above, and they will be delivered to the contractor at Trenton Iron Works, Trenton, New Jersey, at their net cost of 5½ cents per pound for the beams, and 7 cents per pound for the girders, which will be deducted from the amount of his contract as pay for them.

The iron-worker must furnish all the iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building, as it progresses, must be furnished to them promptly, as it is To furnish all other iron-work.

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wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished.

Antæ. There will be in the entrance story five (5) square antæ, and in the second story, four (4), ten (10) inches square and five-eighths (⅝) of an inch thick. In the entrance story

Columns. there will be three (3) round columns, and in the second, four (4), twelve (12) inches in diameter at their bases and ten (10) inches at their necks. All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

Windows. All the windows of the building, including those in the cellar, must have iron shutters, except those windows where the stairs may interfere with their working, and these last must be properly secured by a grating, as may be ordered. The window-shutter castings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, or to the stone jambs, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 5.)

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought and cast iron, from the entrance to second story. The steps and risers must be not less than ⅜ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly moulded balusters secured to the steps by nuts, and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawing No. 5.)

Galvanized iron roof, gutters, &c. He must construct and put up a corrugated iron roof, of No. 22 galvanized sheet iron, upon a proper iron frame, supported upon the iron beams of the ceiling, of the upper story, and properly secured to them, and to the walls of the building. It must have a suitable scuttle, properly secured, and suitable eave gutters, of No. 16 galvanized sheet iron, complete, moulded and fitted as per detail drawing No. 3. He must also furnish and set in place,

Thresholds. cast iron thresholds to all the interior doors.

Miscellaneous. He must furnish all the dowels cramps, ties, bars, truss-

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rods, stirrups, bolts, and other iron-work, necessary to give permanency and stability to the building, of the best American iron, and as they may be wanted for use. He must do and perform all the blacksmith and iron-worker's jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent. Jobbing.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln-drying when necessary,) aud proper for the various purposes, and uses for which it is destined. Lumber.

The joists, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames, must be first quality white or spruce pine; and the stair-rails, and the newels, and rails, of the court-room, best quality of mahogany for the purpose. Scantling. Finishings. Stair-rails.

The floors of all the stories must be $\frac{4}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering. Floors.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior, exeept for the boxes, must be of the same material, and such as require weights and fastenings are to have them, and the rest may be fastened securely and permanently in their places.

The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings. Doors.

The entrance story, to be used for the post office, must be fitted up with glazed windows, with iron sash, and letter boxes between the iron antæ, with openings, &c., as per detail drawings, for delivery of letters, as the superintendent may direct. Post office fittings.

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Finish of custom-house room.

The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it.

Fly doors.

There must be constructed fly doors to the custom-house rooms, the frames $\frac{4}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

He must also construct the wood-work of the privies' building in the yard before mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

Centres.

Casing stone-work.

He must construct all the centres for the arches, trimmings, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage, that may occur to it from neglect of such precaution; construct and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

Jobbing.

PLASTERING, STUCCO-WORK, ETC.

Ceilings. Three-coat work.

Two coats on the brick walls. Granite finish.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawings.

Cornice or angle moulds.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent.

Jobbing.

PAINTING AND GLAZING.

Glazing.

All the glazing must be done with the best quality of Crystal sheet glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

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All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite. Exterior iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish. Inside iron-work.

All the wood-work, except the floors and mahogany work usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent. Grained work.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner. Varnishing.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat. Oiling and varnishing floors.

The painter must "fresco," in the best manner, the ceiling of the custom-house room, and so much of the walls of the same as may be required of him. He must paint the wood-work of the privies, and glaze the windows in a proper manner. Fresco.

GENERAL CONDITIONS.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein partcularly described and provided for. Manner of executing the work. Work and material not specified.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or altrrations shall be estimated for, and the value thereof decided upon by the superintendent, in accordance with the contract prices of the building, subject to the To be done under superintendent. Omissions, additions, and alterations.

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approval of the Department, and be added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

MANNER OF MAKING BIDS.

In making bids for the above work, the department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, December 31, 1855.

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SPECIFICATIONS

FOR

BUILDING THE MARINE HOSPITAL

AT

ST. MARKS, FLORIDA,

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE MARINE HOSPITAL

AT

ST. MARKS, FLORIDA.

Specifications for erecting a marine hospital at St. Marks, Florida, which is to be done (under the direction of a Superintendent appointed by the Hon. Secretary of the Treasury for that purpose) according to the following enumerated drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of basement and principal stories, side elevation, and transverse section.

No. 2. Plan of roof, details of framing, &c.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will be located on or near the site of the old Spanish fort, on a point of land at the junction and between the rivers St. Marks and Waculla, as may be directed by the Superintendent, who will direct such grade of the grounds of the premises as may be required, and also give the proper height of the basement story floor above the surrounding grounds. The location and grade of the grounds are, however, to be subject to such change or modification as the Department may find it necessary to make at the commencement of the work.

Frame. Brick walls.

The frame of the building will be of wood, with two partitions of solid brick-work, and the filling in of the exterior walls of hollow brick-work, both laid in lime mortar.

Gallery.

The main building will be surrounded by a gallery, open around the basement story, but enclosed at the corners at the principal story, forming bed-rooms for the inmates of the establishment.

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Kitchen. The kitchen is attached to one of the corners of the gallery, and its exterior walls will be filled in with hollow brick-work.

Lumber for sills, etc. The sills of the basement story will be of the best quality of lumber for the purpose found in the vicinity; they will be properly embedded in the sand, so that their upper surface will come even with the grade of the ground.

Gallery finishings. The supports and timbers of the galleries are to be seasoned lumber, of suitable quality, dressed and planed on their four sides, and have their four angles chumfered or cut off, and are to form the entire finish without any extra casing, except in cases where economy and durability dictate otherwise.

Door and window dressings. The window, door, and other dressings will be constructed in a similar manner, and also the stairways.

Walls of bed-rooms. The exterior walls around the bed-rooms at the angles of the galleries will be studded; sheathed on their outside, and lathed and plastered on their inside. The doors and windows must be cased, and made to conform thereto.

Floors. The flooring timbers are to be the best quality of hard Southern pine; the floor boards of the same material, not more than 5 inches wide, and full $1\frac{1}{4}$ inch thick, planed, jointed and matched, properly laid down and securely nailed to the joist, &c.

Lath and plastering. The whole of the ceilings of the interior, and gallery of the principal story, are to be lathed and plastered, also the studded walls; the brick walls plastered only.

Ventilating flues. A flue for ventilation must be carried up from the ceiling of each room, and out above the roof, in a proper manner, with proper registers at their outlet from the room.

Drains. Drains must be constructed, leading from the eave conductors to the river, as the Superintendent may direct, to carry off the waste water from the premises.

Stairs. The stairways will be of wood, and extend from the floor of lower gallery to that of the upper one, with a suitable railing around the well-holes at the top. There will also be a step ladder to ascend from the upper gallery to the roof through a scuttle therein.

Eave conductors. At proper points, near the corners of the building, there must be put up two copper eave conductors, 4 inches in diameter, extending from the eaves to the forementioned drains, to convey the water to them.

Eave pipes elbows, etc. The conductors must be made up in sections, with their proper eave pipes, turns, and elbows, and have their joints well calked and secured.

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DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the sills, &c., pertaining to the building, must be done promptly, and as directed by the Superintendent. The spaces on each side of the sills, chimney foundations, interior walls, &c., must be filled in with proper earth, and thoroughly rammed throughout. On the outside of the building, the premises must be filled, with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth and material, that may come out of the trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the Superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The lime, for the lime mortar, must be fresh and *wood-burned*, and the sand of best quality, proper sized, and sharp-gritted.

When the above materials are wanted for use, they must be well and properly mixed for their several purposes, and thoroughly manipulated, as may be directed by the Superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Hollow walls.

All the exterior brick walls of the building must be laid in lime mortar, with a space of two inches between the outside and inside courses, which must be tied together by headers, every fifth course, at intervals of two bricks.

Fireplaces and hearths.

The fireplaces and hearths must be of best quality of common brick, properly laid in lime mortar.

Jobbing.

The contractors must furnish all the brick, mortar, labor, staging, and all other materials incident to the masons and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, and mason work, required in completing this building or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the Superintendent.

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CARPENTER AND JOINER'S WORK, LUMBER, &c.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes and uses for which it is destined.

Scantling. The joist, or scantling, must be hard pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in

Finishings. width; the doors and other inside finishings, and window frames, must be first quality white or spruce pine.

Floors. The floors of all the stories must be $\frac{6}{4}$ inch thick, milled, jointed, and matched, not over 5 inches wide. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

Window frames. The window frames and sash must be constructed for French casements, and furnished with sash, hinges, fastenings, &c., complete, of the best quality. The finish of the face and jamb will be as shown by the

Size of glass, etc. drawings. The sash and size of glass of the windows, and side and fan lights of the doors, to conform to the detail drawings and figures on the plans.

Doors. All the swinging inside doors will be $\frac{7}{4}$ inch thick, four panels, moulded and finished throughout, as per drawings; all with a swinging casement over them, for light and ventilation, 2 feet high, properly glazed, hung, and

Casing. fastened. The casings and architraves will be as per drawing.

The outside doors will be the width and height represented on the drawing.

Each of the above inside doors will be hung with 3 best cast iron butt hinges, 4 by 4 inches, with $1\frac{1}{4}$-inch screws, and have a 3-tumbler mortice lock, porcelain knobs, and bronzed trimmings, all of the best kind and quality.

Each of the outside doors will be hung with 3 best cast iron butt hinges, $4\frac{1}{2}$ by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have a 3-tumbler mortice outside door lock, porcelain knobs, and bronzed trimmings, all of the best kind and quality.

Skirting. Skirting 8 inches wide is to be put around all the rooms over the plastering.

The carpenter will do all the furring of the ceilings required, and properly prepare the whole building for plastering, put on all grounds, casings, &c., needed.

Roof, etc. The carpenter must construct and prepare in a proper manner the roof to receive the tin covering, together with

Gutters. the proper eave gutters, &c.

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He will at his own expense procure, to be put on in the very best and most perfect manner, the tin covering of the roof, gutters, &c., as a part of his work; and every thing else necessary to the completion of the building, (not specially directed otherwise to be done,) he is also to put into his bid as a part of his work. Tinning. Miscellanies.

He must construct the centres for the trimmers, &c.; construct and put up all the necessary ventilating trunks; fully coustruct and complete all the other carpenter and joiner's work on the buildings, and do all the jobbing, &c., required of the carpenter and joiner, furnishing all the materials, and executing the whole work in a faithful and workmanlike manner, to the acceptance of the superintendent. Centres. Jobbing.

PLASTERING, STUCCO-WORK, &c.

All the ceilings must be lathed, and plastered in two coats, and the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse, finished with the float in the best manner, so as to prevent defacement and the condensation of moisture. Ceilings. Two coats on the brick walls. Graite finish.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the Superintendent. Jobbing.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean and perfect on the completion of the work. Glazing.

The number of lights, sizes, &c., as indicated on the drawings.

All the exterior of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite. Exterior.

All the interior wood-work, except the floors, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the Superintendent. Inside. Grained work.

All the graining must have two coats of best copal varnish—coats sufficient to give it proper body. Varnishing.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat. Oiling and varnishing floors.

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GENERAL CONDITIONS.

Manner of executing the work.

All the work must be done in the best and most workmanlike manner, of proper and appropriate material, according to the plans herein before cited, and the foregoing specifications; and everything necessary to the proper and complete execution of said plans must be done and finished, whether the same may have been herein specified or not; and all such necessary work or materials which may not have been set forth in these specifications, must be done, and materials furnished in a manner corresponding with the rest of the work, as well and as faithfully as though the same were herein particularly described and provided for.

Work and material not specified.

To be done under Superintendent.

Every part of the building must be executed under the supervision of the forementioned Superintendent, and be subject to his entire approval; and in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor or contractors, and carried into effect, without in any way violating or vitiating any contract which may have been made for work or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to or deducted from the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, September 5, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AND

POST OFFICE

AT

TOLEDO, OHIO.

Prepared at the Office of the Construction of Buildings, Treasury Department, Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AND POST OFFICE

AT

TOLEDO, OHIO.

Specifications for erecting a new custom-house, including accommodations for a Post Office, at Toledo, Ohio, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations and cellar.
2. Plans of first and second stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Details of roof, &c.
6. " exterior, &c.
7. " " and interior, &c.
8. " cornice, stairs, &c.
9. " miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Madison street, its front line being ten (10) feet from said street, and its northwest end fifteen (15) feet from St. Clair street. The entrance story floor will be three (3) feet above the sidewalk at the northwest corner of the lot.

The premises on the northeast and northwest of the building must have a proper grade from the sidewalks up to the steps, and underpinning of the building to conform to the drawings; and on the southeast and south-

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west of the building, the lot must be properly graded from the ground line on the drawings in each direction from the building.

Cellar window sky-lights.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the grade of the ground down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curbstone which must surround them, and be there properly secured.

Covering.

Area walls.

The walls of these areas will be rubble-stone masonry twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalks of the streets, and the approaches to the building from it, must be paved either with the best hard paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully be of the largest size convenient to be obtained, and those secured against any settlement. The window jambs, and heads in the cellar wall, must be rough-hammered to receive the window frames and sashes, as may be found to be best. The stones, for the foundations, should for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same.

Door and window jambs.

Size of stone.

The underpinning, the door sills, steps, &c., will be of the best quality of lime stone found in the vicinity.

Stone-work.

The stone-work of the building must be well and properly dressed with good surfaces, and arrises, the joints small, and well pointed, the beds, and builds full to the square, and perfect, and the whole to be left clean, and perfect on the completion of the building.

The exterior of the building, above the underpinning, including the mouldings of the panels of the piers, and most of the cornice, will be constructed with best quality of brick-work, the outside facing being of selected face

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brick, and the moulding brick made to conform to shape shown on the drawing. A part of the cornice will be of iron, as shown by the drawing.

Outside doors, window frames, &c.

The outside doors, their frames, circular caps, transom and ornamental sash screen, the window sills, post, caps, &c., the bead of the window frames, and the window shutters and their frames, must be of iron.

Floors.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or hard pine flooring plank, or boards. The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than three (3) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The columns, resting upon square piers in the cellar with their stone foundations below the cellar paving, must extend from said piers up through the stories, and support their floors and ceilings.

Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

Ventilating flues.

A flue, for ventilation, is to be made from the upper part of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops, and must have an Arnott's ventilating register to each flue at its opening into the room.

Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other wood-work.

Cellar floor.

The floor, of the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner.

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The entrance hall, and vestibule to the post office, in the first story, and the vestibule to the custom-house and rooms in the second story, must be paved with the best quality 2-inch marble, or German tile, laid in diagonal courses with cement mortar, in tesselated manner, with colors, dark and light, alternating.

Drains.

Open gutters must be constructed, leading from the eave conductors to the street gutters, as the superintendent may direct, to carry off the waste water from the premises.

Interior hollow walls.

All the partitions in the building will be 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

Stairs.

The stairways, of the building, must be of *wrought* and *cast* iron-work, having a mahogany handrail, extending from the entrance story to the second one, and around the well-hole therein, and a proper sized iron handrail to the cellar stairs. There will also be a step ladder of wrought iron, to ascend from the second story to the roof through a scuttle therein.

Cast iron eave conductors inserted in outside walls.

At the east and west corners of the building, in the rear part, there must be inserted in the outside walls, two cast iron eave conductors, *five* (5) inches in diameter, and *half* ($\frac{1}{2}$) an inch thick, extending from the eaves to the forementioned drains, to convey the water to them; these pipes must be fully secured against the action of frost.

Eave pipes elbows &c

The conductors must be put up in sections, with their proper eave pipes, turns, and elbows, as the work progresses, and have their joints well calked and secured with lead.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 5 divisions, 3 by $4\frac{1}{2}$ feet, with a passage in front of them $3\frac{1}{2}$ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

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DIGGING, GRADING, &c.

Excavation

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

STONECUTTER, MASON, AND BRICKLAYER'S WORK.

Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean, and sharp gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Manner of laying

All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

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Cramped and anchored. The underpinning stones must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and bedded in the stone, and secured with brimstone, in the best manner, by the mason.

Backing All the stone-work must be backed up with brick-work, in cement mortar, with a space of two (2) inches next to the inner course towards the cellar, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. All the exterior brick walls of the building must be laid in lime mortar with a space of two inches next to the inner course of brick towards the rooms, which course must be tied to the walls by headers, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls, the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall, a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Solid at bearings.

Wall plates.

Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, (to be worth $20 each, exclusive of their setting,) and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the face of the mantel, and five feet six inches long.

Grates.

Hearths.

Heating apparatus. There must be constructed in the cellar one furnace, of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the antæ. The whole to be finished complete, and put up in good working order, with all the hot-air registers, &c. In the entrance story, 2 hot-air registers 15 by 19 inches, and 2 ditto 11 by 15 inches; and in the second story, 2 ditto 11 by 15 inches, and 2 ditto 15 by 19 inches: all which must be inserted in soap-stone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height, unless otherwise directed by the superintendent.

Hot-air registers.

Coal-slides. Suitable coal-slides, to lead to the cellar, must be constructed, with proper covers, &c.

Extra brick-work. The mason must give the price, per thousand, for laying any extra brick-work required.

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The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason work, and bricklayer's work on the buildings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building, or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent. Jobbing.

IRON-WORK.

There will be furnished by the Treasury Department, wrought iron *beams* and *girders*, for the floors, ceilings, and roof, together with the cramps necessary for the proper securing of the beams, and girders together, and to the walls of the building, as shown in detail drawings. They will be delivered, upon a suitable wharf, at Toledo, by the Department, and, by the contractor, taken thence, and put into the building. Beams and girders.

The iron-worker must furnish all the other iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished. To furnish all other iron-work.

There will be in the entrance story two (2) square antæ ten (10) inches square and five-eighths ($\frac{5}{8}$) of an inch thick, and six (6) round columns twelve (12) inches at their base, and ten (10) inches at their necks, and five-eighths ($\frac{5}{8}$) of an inch thick. In the second story there will be three (3) square antæ and five (5) round columns of the same size and thickness as those in the entrance story. Antæ.

All the above will have capitals and bases, as shown on the drawings. (Vide "detail" drawings.)

The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the cast iron frames, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawings.) Window.

The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., Antæ cast true.

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must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, of wrought and cast iron, from the cellar to the floor of the second story. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly-moulded balusters secured to the steps by nuts and screws, and supporting a mahogany rail, above the cellar, to be put on by the carpenter. (See detail drawings.)

Galvanized iron roof, gutters, &c. He must construct and put up a galvanized, corrugated, iron roof upon a proper iron frame, supported upon the iron beams of the ceiling of the upper story, and properly secured to them, and to the walls of the building. It must have suitable eave gutters, scuttle, &c., complete, moulded and fitted as per detail drawings. He must also furnish

Thresholds. and set in place, cast iron thresholds to all the interior doors.

Miscellaneous. He must furnish all the dowels, cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency, and stability to the building, of the best American iron, and as they may be wanted for use; and any delay, from want of delivery, shall subject the contractor to a deduction of twice its value from his compensation for work performed, and materials furnished. He must do, and perform all the blacksmith and iron-worker's

Jobbing. jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

Lumber. All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln drying when necessary,) and proper for the various purposes, and uses for which it is destined.

Scantling. The joist, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches

Finishings. in width; the doors, and other inside finishings, and window frames, must be first quality white, or spruce pine; and

Stair-rails. the stair-rails, best quality of mahogany for the purpose.

Floors. The floors of all the stories must be $\frac{6}{4}$ inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a

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thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist, or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering.

The sash of the exterior of the building must be of white pine, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastings are to have them, and the rest may be fastened securely and permanently in their places.

Doors. The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings.

Post office fittings. The entrance story, to be used for the post office, must be fitted up with glazed windows, pine sash, and letter boxes with openings, for delivery of letters, &c., as the superintendent may direct. (Vide detail drawings.)

Finish of custom-house room. The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it.

Fly door. There must be constructed a fly door to the custom-house rooms, the frames $\frac{6}{4}$ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

He must also construct the wood-work for the privies' building in the yard heretofore mentioned.

The mahogany stair-rail will be $2\frac{1}{4}$ by 4 inches, wrought to pattern in best manner.

Centres. Casing stone-work. He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage that may occur to it from neglect of such precaution; construct, and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the

Jobbing.

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materials, and executing the whole work in a faithful, and workmanlike manner, to the acceptance of the superintendent.

PLASTERING, STUCCO-WORK, ETC.

Ceilings. Three coat work

Two coats on the brick walls. Granite finish.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper manner, leaving the walls rough as above. All the

Cornice or angle moulds.

rooms must have a moulding, in the angles at the ceiling, as represented on the drawings.

All of the materials must be of the very best quality for the purpose, and all the work, including the necessary

Jobbing.

jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent.

PAINTING AND GLAZING.

Glazing

All the glazing must be done with the best quality of American crown glass, well bedded back, puttied, and left clean, and perfect on the completion of the work.

The number of lights, sizes, &c., as indicated on the drawings.

Exterior iron-work.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite.

Inside iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish.

Grained work

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent.

Varnishing.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner.

Oiling and varnishing floors.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat.

The painter must also paint the wood-work of the privies in a proper manner, and glaze the windows.

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GENERAL CONDITIONS.

All the work must be done in the best and most workmanlike manner, of proper, and appropriate material, according to the plans herein before cited, and the foregoing specifications; and every thing necessary to the proper, and complete execution of said plans must be done and finished, whether the same may have been, herein, specified or not; and all such necessary work, or materials, which may not have been set forth in these specifications, must be done, and materials furnished, in a manner corresponding with the rest of the work, as well, and as faithfully, as though the same were herein particularly described and provided for.

Manner of executing the work.

Work and material not specified.

Every part of the building must be executed under the supervision of the forementioned superintendent, and be subject to his entire approval; and, in case any omissions, additions, or alterations of the plans may be required by the Treasury Department during the progress of the work, the same shall be acceded to by the contractor, or contractors, and carried into effect, without in any way violating, or vitiating any contract which may have been made for work, or material; and all such omissions, additions, or alterations shall be estimated for, and the value thereof agreed upon, and approved by the Department, and added to, or deducted from, the contract, by endorsement upon its back, as the case may be, before going into execution, or no allowance will be made for them by either party.

To be done under superintendent.

Omissions, additions, and alterations.

MANNER OF MAKING BIDS.

In making bids for the above work, the Department specially requires them to be made in detail—that is, by bills of parcels of each article and separate kind of work, to which the prices of such article and kind of work are to be affixed, respectively, and then comprised in one gross amount.

OFFICE OF THE CONSTRUCTION OF BUILDINGS,
Treasury Department, August 7, 1855.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE

AT

WHEELING, VIRGINIA.

INCLUDING ACCOMMODATIONS

FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Prepared at the Office of the Construction of Buildings, Treasury Department,
Washington, D. C.

WASHINGTON:
A. O. P. NICHOLSON, PUBLIC PRINTER.
1856.

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SPECIFICATIONS

FOR

BUILDING THE CUSTOM-HOUSE AT WHEELING, VA.,

INCLUDING

ACCOMMODATIONS FOR A POST OFFICE AND UNITED STATES COURT ROOM.

Specifications for erecting a new custom-house at Wheeling, Va., including accommodations for a post office, and United States court room, which is to be done (under the direction of a superintendent appointed by the Hon. Secretary of the Treasury, for that purpose) according to the following, enumerated, drawings, consisting of plans, elevations, sections, and working drawings, designed, and prepared at the Office of the Construction of Buildings, Treasury Department, and agreeably to such further drawings, and directions, in explanation thereof, as may, hereafter, from time to time, be furnished therefrom:

DRAWINGS.

Drawings.

No. 1. Plans of foundations, cellar, and entrance story.
2. Plans of second and third stories.
3. Front and end elevations.
4. Longitudinal and transverse sections.
5. Drawing and details of roof.
6. " " " exterior.
7. " " " interior.
8. " " " windows and doors.
9. " " " miscellaneous finishings.

GENERAL DESCRIPTION OF THE WORKS.

Location.

The building will front upon Market street, its front line being ten (10) feet from said street, and its south end twenty-two (22) feet from John street. The entrance story floor will be five (5) feet above the inside line of the sidewalk at the intersection of said streets. The premises must have a proper grade up to the building from the sidewalk; and the steps and underpinning of the building must be made to conform to said grade—the first in their number, and the last in its height, instead of (in that respect) conforming to the drawings. The steps, at the south end, must also have suitable iron handrails and balusters, if required.

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Cellar window sky-lights.

On the sides and ends of the building, there will be sunk *areas*, or *sky-lights*, to each cellar window, extending from the top of the sidewalk or paving down to the bottom of their sills. They will be covered with a suitable and substantial *wrought iron* grating, let into a rebate in a suitable curbstone which must surround them, and be there properly secured.

Covering.

Area walls.

The walls of these areas will be rough-coursed ashlar, twelve (12) inches thick, resting on a foundation eighteen (18) inches thick, which must go below the action of the frost. The top of the wall must be finished to receive the curbstones in a proper manner. The bottoms of the areas must be paved with brick, and each be provided with a small drain, to discharge, outside of the walls, into the ground, any water that may fall into them through the grating.

Paving of area.

Paving of sidewalk.

The sidewalks of the two streets, together with 60 feet in width on the front, and two spaces, each 14 feet wide, at the sonth end, from the sidewalks to the building, must be paved either with the best hard paving brick, or stone flagging, laid to a curbstone of the best material and form to be obtained in the vicinity.

Cellar, its brick partition walls.

A brick wall will divide the post office packing room from the fuel and furnace room, and the post office wash room, in the cellar, and iron stairways must come down from the entrance story into each of the first two rooms.

Cellar walls.

The cellar walls must be constructed of proper cellar-wall stones, laid in courses, upon foundations of large stones laid in the most perfect manner, on a bed of concrete, (if required for its proper stability,) and otherwise fully secured against any settlement. The window, and door jambs, and heads in the cellar wall, must be rough-hammered, and rebated to receive the window frames, and sashes, and the doors, or doors and frames, as may be found to be best. The stones, for the foundations, should be of the largest size convenient to be obtained, and those for the cellar walls should be of the best, and most proper size for the work. They should be bonded together in the strongest manner, full flushed with cement mortar, and well bedded in the same. The cellar will be one foot six inches deeper than represented on the lithographic section and the windows will be one foot six inches longer than there laid down.

Window and door jambs.

Size of stone.

Stone-work.

The entire exterior of the building will be faced with the best quality of Wheeling sand stone to be obtained in the vicinity, including the door and window dressings, the belt courses, cornice, &c. The stone-work of the building must be well and properly dressed, with good surfaces, and arrises, the joints small, and well pointed, the beds and builds full to the square, and perfect, and the whole to be left clean, and perfect, on the completion of the building.

The outside doors, and the bead of the widow frames, and the window shutters and their frames, must be of iron. Outside doors, window frames, &c.

The floorings, of the whole building, are to be composed of small segmental arches, of hard-burned brick-work, turned from *wrought* iron beams resting upon the exterior walls, and upon girders supported by *cast* iron columns, and by the said walls; the whole covered with *tile*, or southern pine flooring plank, or boards. Floors.

The ceiling, of the upper story, must also be composed of iron beams, and brick arches, their haunches brought up with suitable material, so that there shall be a descent from the centre of the building to the eaves, of not less than five (5) inches over each beam, and the whole covered with "asphalt," to carry off any water that may percolate through the iron covering of the roof. The cast-iron strutts of the roof must be set in their place, and secured to the beams; the arches of the above ceiling must be built in and the "asphalt" put on and finished before the corrugated iron of the roof is put on and secured to its frame of purlines. The columns of the cellar must have suitable cast iron shoes to rest upon suitable foundations laid below the cellar paving equal to sustaining the weight coming upon them, and suitable cast iron connecting pieces one inch thick in part forming the abaces of the capitals of the columns extending up to the bases and bottom of the columns and antæ of the entrance story which rests on them. These connecting pieces support the girders of the entrance story floor and have suitable openings in them to receive the hot-air pipes from the furnaces. There will be connecting pieces of cast iron, one inch thick, between the columns and antæ of the first and second stories and the second and third ones, which will support the girders of these stories, and where necessary have suitable openings in them from which the hot-air pipes can be brought out to the registers of each room. The girders of the ceiling of the upper story will rest immediately upon the capitals of the columns. Ceiling of upper story.

The thickness, of the brick-work, of the arches, must be the width of a brick. Proper scantling, furnished, and put in, by the carpenter, with such aid, as may be required, from the bricklayer, must be laid, and fastened on the brick-work, to receive the floor, and nail it to; while, at the proper time, the bricklayer must fill in the haunches of the arches, and spaces between the scantling, up to a level with their top, with concrete of cement mortar, brickbats, coarse gravel, &c., and make it level and proper to receive the floors of wood. In such floors as are to be covered with stone, or marble tile, the scantling must be left out.

A flue, for ventilation, is to be made from the upper part Ventilating flues.

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of each room throughout the building: they are to go up to the attic, and thence, be carried by wooden trunks to the chimney tops without smoke flues, and through them to their tops. They must have an Arnott's ventilating register at their openings into the room, or some other equally appropriate register for the purpose, to each flue.

Insert wooden blocks.

Wooden blocks must be walled in wherever required, to which to secure the jamb casings and other woodwork.

Cellar floor.

The floor, of the fuel and furnace room and wash room in the cellar, must be paved, throughout, with the best paving brick, upon a bed of concrete 6 inches thick, in the very best manner, with stone inside doorsills to all the cellar doors. The post office packing room in the cellar must have a suitable wooden floor upon the above thickness of concrete.

The entrance hall, and vestibule to the post office, in the first story, the vestibule and entrance to the custom-house and rooms, in the second story, and the vestibules and passages to the court room and its offices, in the third and half stories, must be paved with the best quality of Minton, Hollins & Co's plain ornamental pavement, of three or more colors, laid in the best manner, as may be directed by the superintendent.

Sewer.

A sewer, eighteen (18) inches in diameter, must be constructed to the nearest city sewer, or to the river, (agreeably to the municipal laws and regulations of the city of Wheeling,) through which the soil from the water-closets, &c., and the waste water from the premises, can be discharged.

Drains.

Drains must be constructed, leading from the eave conductors, to the soil pipes of the water-closets and sinks, to the above sewer, as may be directed by the superintendent. They are to be 10-inch, interior diameter, barrel drains of 4-inch brick-work, laid in cement. They must be thoroughly plastered throughout on their inside, and where they go through the foundations be constructed in connexion with them, and fully secured against frost.

Interior hollow walls.

All the partitions in the building will be 9 and 11-inch hollow brick walls. On the delivery of the iron-work at the building, the mason must furnish the necessary rigging, staging, labor, and tools, not belonging to the iron-worker or blacksmith's trade, to put the same into its place, and do, and perform all the work necessary thereto, except what belongs to the said trades, being assisted therein by said tradesmen, who must in all cases do and perform all the work, properly pertaining to their respective trades, in said iron-work, the mason being responsible for its proper insertion, and permanency in the building.

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The upper story, at the north end, must be divided into two stories by the insertion of an intermediate flooring, shown only on the longitudinal section, the upper one to be fully lighted and ventilated by sky-lights on roof, not shown on the drawings. The plan and finish of the upper rooms must be similar to those under them, as shown on drawing No. 4. Half stories at rear end.

The stairways, to the building, must be of *wrought* and *cast* iron-work, with a mahogany handrail, in two flights, extending from the entrance story to the upper, and upper half story. Where the stairs cross the windows at the ends, they will have rail, balusters, and string similar to the well-hole side of the stairs, and the windows will be finished without iron shutters. From the upper half story to the roof, there must be constructed an enclosed flight of stairs, three (3) feet wide, with small iron handrail as directed by the superintendent, (but not shown on the drawings,) by which the roof may be approached for any purpose. The cellar stairs must be of iron, (as above,) and with proper sized iron handrail. Stairs.

There must be two (2) water-closets in the third story, and two others over them; all of which must be furnished with proper and necessary spring seats, bowls, traps, urine sinks, &c., complete; also with tanks, and cisterns, capable of holding, on an average, two hundred (200) gallons of water, to each closet, placed immediately over them, and receiving their supplies from the cisterns or well on the premises. All their main and supply pipes, &c., must be inserted in the brick-work as it goes up, and be fully secured against the action of the frost, and a channel left to receive the soil pipe, which, when put in, must also be fully guarded and secured against the action of the frost. Water-closets.

On the rear side of the building, near the corners, there must be put up and secured in a proper manner, two suitable tinned copper leaders, or conductors, from the eaves to the forementioned drains, four inches square, to convey the water from the roof to them. Leaders or conductors.

There must be another water conductor, of cast iron, half ($\frac{1}{2}$) an inch thick and *three* (3) inches in diameter, from the eaves to the cisterns of the water-closets in the upper stories, for use in warm weather, with the necessary apparatus to close it during cold weather. This must be put up in the proper state of the works with its elbows, turns, &c., and have its joints well secured with lead, &c. Another conductor from eaves to water-closet cisterns.

At a suitable position on the premises, there must be sunk one or more cisterns, of brick-work in hydraulic cement mortar, and thoroughly plastered upon their inside with same kind of mortar, to receive the rain water of the roof, and to supply the reservoir with water for all pur- Cisterns.

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poses. They must have attached to them a suitable and efficient filtering apparatus, equal to fully purifying the water before it goes into the cisterns. They must hold 20,000 gallons in the aggregate, and have suitable iron pipes, laid below the action of the frost, extending from the eave conductors to the filterers. These cisterns must be arched over so as to sustain any weight that may come upon them, and at the crown of the arch have a *man-hole* covered with a suitable stone slab. If found advisable, an artesian well will be substituted for the above cistern or cisterns on the premises, by order of the Treasury Department.

Well.

Supply

From the above cisterns or artesian well proper supply pipes must be extended to all parts of the building, and a suitable and approved forcing pump, of a sufficient power, and capacity to, properly, distribute the water, as above, must be placed, and secured in the most convenient location on the premises.

Force pump.

Privies.

On the rear of the premises, there must be constructed a suitable building for privies, &c., for the use of the building. The exterior and partition walls must be of brick, the floors of flagging stone, and the roof slated. It must contain 10 divisions, 3 by 4½ feet, with a passage in front of them 3½ feet wide, and be 10 feet high. It must be constructed with the necessary doors, windows, seats, boxes, urinary sinks, ventilating flues, &c., required, and be fully completed in the best manner.

DIGGING, GRADING, &c.

Excavation.

The necessary excavation for putting in the foundation, cellar walls, and all other works of a similar nature pertaining to the building, must be done promptly, and as directed by the superintendent.

The spaces on each side of the foundation walls, and outside of the exterior cellar walls, must be filled in with proper earth, and thoroughly rammed throughout; the inside must be brought up to within 6 inches of the paving of the cellar, and properly prepared to receive the concrete bed, which must be laid on it, and the exterior, filled with proper earth, up to the proper grade line of the premises, as may hereafter be more definitely determined.

Removing earth and rubbish.

All the surplus earth, and material, that may come out of the cellar, and trenches, not required for the purpose of grading, must be carted away; and all the rubbish that may accumulate during the progress of the work must be carted away, or deposited on the ground, and properly graded, as the superintendent may direct. On the completion of the work, all the streets and grounds must be cleared up, and such disposition made of all the refuse materials as may be directed.

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Mortar.

The cement mortar must be composed of materials of the best quality; the hydraulic cement be fresh burned, perfectly ground, securely put up, and kept dry until used; and the sand of suitable size for the various purposes, clean and sharp-gritted. The lime, for the lime mortar, must be fresh, and *wood-burned*, and the sand of best quality, proper sized, and sharp-gritted.

When the above materials are wanted for use, they must be well, and properly mixed, for their several purposes, and thoroughly manipulated, as may be directed by the superintendent, and the mortar used in its most perfect state for the purposes required.

Brick.

The brick must all be of the best quality, firm in texture, hard-burned, and laid in the most solid manner.

Stone.

The bidder must furnish to the Treasury Department a sample of the stone which he proposes to put into the exterior of the building. It must be a *cube* of six (6) inches square on each face, and five of its six faces wrought in the several manners of working the stone in the vicinity, and the sixth face left as a split, rough surface, with half of an inch at each edge, tooled or chiselled straight and true.

Dressing.

Manner of laying

All the stone-work must be laid with full flushed joints, in cement mortar, the joints raked out, to receive the *pointing*, while the mortar is sufficiently moist for the purpose, and the *pointing* must be done when the work shall have become sufficiently dry to allow of its being properly performed.

Thickness of ashlar.

Three-quarters of the ashlar of the first story must be fourteen (14) inches thick from its face, and the other quarter as headers and binders, from eighteen (18) to twenty (20) inches thick. In the second story, three-quarters of the ashlar must be ten (10) inches thick, and one-fourth as headers and binders, from fourteen (14) to eighteen (18) inches thick. In the third story, three-fourths of the ashlar nine (9) inches, and the residue, as headers and binders, from thirteen (13) to seventeen (17) inches thick.

Doorway piers.

The piers, of the doorways, provided they can be so obtained, must be in three blocks, the *base* being one, the *shaft* another, and the *capital* the third.

Bed of stone to cornice, &c.

The stones, composing the window, and door dressings, the *belt courses*, and cornice, must have proper beds, and be of sufficient width to ensure permanency in the construction, and safety in setting, and securing them in their places.

Cramped and anchored.

All the stone must be properly cramped, and anchored to one another, and also to the brick-work, by cramps, furnished by the iron-worker. They must be properly let into, and imbedded in the stone,

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and secured with brimstone, in the best manner by the mason.

Backing. All the stone-work must be backed up with brick-work in cement mortar, with a space of two (2) inches next to the inner course towards the rooms, which must be tied to the walls by *headers*, every fifth course, at intervals of two bricks. Where heavy weights come on the exterior walls,

Solid at bearings. the open space must be made solid, a sufficient distance around it, to ensure proper stability to receive the weight imposed; and when a girder, or beam, rests on the wall,

Wall plates. a *cast iron* wall plate, furnished by the iron-worker, of proper size and thickness, must be inserted under them.

Fireplaces. The fireplaces must be made with fire-brick, and have a marble mantel, (to be worth $30 each, exclusive of

Grates. their setting,) and, if required, coal grates, (worth $15 each, exclusive of their setting,) with all the requisite fixtures, must be furnished, and properly set in each fireplace.

Hearths. The hearths must be best quality, fire-proof, stone for the purpose, twenty inches wide from the base of the mantel, and five feet six inches long.

Heating apparatus. There must be constructed in the cellar one or two furnaces (as may be thought best) of sufficient power and capacity to warm the entire building, furnished with the necessary cold-air trunks and tin hot-air flues, of proper and sufficient size, leading to all the rooms; and, when necessary or required, they must be carried up through the columns, antæ, chimney, &c. The whole to be finished complete, and put up in good working order, with all the

Hot-air registers. hot-air registers, &c. In the entrance story, 5 hot-air registers 15 by 19 inches; in the second story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15 inches; in the third story, 2 ditto 15 by 19 inches, and 4 ditto 11 by 15; and in the half-story, 2 ditto 11 by 15 inches: all which must be

Wall courses. inserted in soapstone frames. The walls, throughout the entire work, must be carried up in regular, horizontal, courses, not exceeding three (3) feet in height. unless otherwise directed by the superintendent.

Coal-slides. Suitable coal-slides, to lead to the cellar, must be constructed, with the proper covers, &c.

Extra brick-work. The masons must give the price, per thousand, for laying any extra brick-work required.

The contractors must furnish all the stone, brick, mortar, labor, staging, and all other materials incident to the stone-work, mason's work, and bricklayer's work on the build-

Jobbing ings; do and perform all the jobbing pertaining to the brick, stone, and mason's work, required in completing this building or its appurtenances, without any extra charge for the same; and perform all the work in the best manner, to the acceptance of the superintendent.

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IRON-WORK.

There will be the following beams and girders in the floors and ceilings of the building, viz: Beams and girders.

163	beams,	20	feet	9	inches long.
1	"	17	"	2	"
71	"	15	"	0	"
3	"	12	"	3	"
4	girders,	18	"	6	"
4	"	17	"	11½	"
4	"	17	"	10½	"
6	"	15	"	0	"
8	"	14	"	2	"
4	"	14	"	1	"
6	"	13	"	10	"
1	"	9	"	10	"
3	"	9	"	8	"
1	"	7	"	6	"
3	"	7	"	3	"

The Treasury Department have purchased the above, and which will be delivered to the contractor at Trenton Iron Works, Trenton, New Jersey, at their net cost of 5½ cents per pound for the beams, and 7 cents per pound for the girders, which will be deducted from the amount of his contract as pay for them.

The iron-worker must furnish all the iron-work required for the building. All that is mentioned in these specifications, as to be furnished to the other mechanics on the building, and by them to be inserted in the building, as it progresses, must be furnished to them promptly, as it is wanted for use; and any delay from want of seasonable delivery shall subject the contractor to a deduction of twice its value from his compensation for work performed and materials furnished. To furnish all other iron-work.

There will be in the cellar twelve (12) round columns, sixteen (16) inches at their base, and fourteen (14) at their necks, and three-fourths (¾) of an inch thick. In the entrance story there will be eleven (11) square antæ; in the second story, eight (8), and four (4) in the third story, twelve (12) inches square and three-quarters (¾) of an inch thick. In the entrance story there will be nine (9) round columns, and in the third, four (4), fourteen (14) inches diameter at their bases and twelve (12) inches at their necks, and three-fourths (¾) inch thick. All the above will have capitals and bases, as shown on the drawings, and must be fitted with the most perfect bearing surface at their connection with their shoes, bases, capitals, &c, (Vide "detail" drawings.) Antæ. Columns.

All the windows of the building, including those in the cellar, must have iron shutters, except those windows Windows.

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where the stairs may interfere with their working, and these last must be properly secured by a grating, as may be ordered. The window-shutter casings are to be of cast iron, but the shutters must be of wrought iron, properly hung to the frames, having suitable fastenings, &c., complete. The outside doors must also be constructed of wrought iron, properly hung to the frames, or to the stone jambs, as shown on the drawings, having suitable locks, knobs, bolts, &c., complete. (See detail drawing No. 8)

Antæ cast true. The antæs must be cast perfectly true, and straight, or their surfaces planed, or turned to make them so; all the bearing joints, antæ, girders, beams, window frames, &c., must be turned, planed, or fitted perfectly true to each other; all the grooves for receiving doors, sash, shutters, &c., must be planed true and straight.

Stairways. The iron-worker must furnish, construct, and put up, with such assistance as the mason should give in his part of the work, the stairs, as before specified. They must be properly supported by strings, brackets, and other necessary appendages, and have properly fitted skirtings. The upper steps and their noosings will continue around the several landings to receive the balusters which will be secured to them as to the other steps—and the facing of the well hole will be of iron and extend down so as to receive the plastering of the ceiling below. The steps and risers must be not less than $\frac{3}{8}$ thick, properly moulded, wrought, and corrugated, and securely fastened to the brick walls, having properly moulded balusters secured to the steps by nuts, and screws, and supporting a mahogany rail, to be put on by the carpenter. (See detail drawing No. 9.)

Galvanized iron roof, gutters, &c. He must construct and put up a corrugated iron roof, of No. 22 galvanized sheet iron, upon a proper iron frame, supported upon the iron beams of the ceiling, of the upper story, and properly secured to them, and to the walls of the building. At the head of the stairs to the roof he must construct in it a suitable sized scuttle with hangings and fastenings complete. He must put up suitable eave gutters, of No. 16 galvanized sheet iron, complete, moulded and fitted as per detail drawing No. 5. He must also furnish and set in place, cast iron thresholds to all the interior doors.

Thresholds. Miscellaneous. He must furnish all the dowels cramps, ties, bars, truss-rods, stirrups, bolts, and other iron-work, necessary to give permanency and stability to the building, of the best American iron, and as they may be wanted for use. He must do and perform all the blacksmith and iron-worker's

Jobbing. jobbing on the building, furnishing tools, labor, and all materials for the above work, to the full satisfaction of the superintendent.

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CARPENTER, AND JOINER'S WORK, LUMBER, ETC.

All the lumber must be of the best quality, free from unsound knots, shakes, or rots, well and thoroughly seasoned, (by kiln-drying when necessary,) and proper for the various purposes, and uses for which it is destined. **Lumber.**

The joists, or scantling, must be spruce or white pine; the floor boards $\frac{6}{4}$-inch heart, hard pine, not more than 5 inches in width; the doors, and other inside finishings, and window frames, must be first quality white or spruce pine; and the stair-rails, and the newels, and rails, of the court-room, best quality of mahogany for the purpose. **Scantling.** **Finishings.** **Stair-rails.**

The floors of all the stories must be $\frac{6}{4}$-inch thick, milled, jointed, and matched, not over 6 inches wide, laid on scantling 3 by 4 inches, fastened to the brick-work in a thorough manner, with the spaces between them filled with cement concrete by the mason, same as the haunches of the arches, and brought up level with their tops. The scantlings must be not more than 16 inches apart, from centre to centre, and the floors blind-nailed, each board to each joist or scantling. All the ceilings, and other parts of the building requiring it, must be furred, and properly prepared, for lathing and plastering. **Floors.**

The sash of the exterior of the building must be of black walnut, properly hung with weights, and securely and properly fastened. The sash for the interior must be of the same material, and such as require weights and fastenings are to have them, and the rest may be fastened securely and permanently in their places.

The doors must be finished as per drawings, being $\frac{7}{4}$ inch thick, properly panelled throughout the building, panels sunk on both sides with moulded slips, &c.; hung to the jambs by 3 best cast iron butt hinges, 4 by $4\frac{1}{2}$ inches, with $1\frac{3}{4}$-inch screws, and have best 3-tumbler mortice locks, (of E. Robinson's make,) best porcelain knobs, and bronzed trimmings; the water-closet doors may be but $\frac{5}{4}$ inch thick. **Doors.**

The entrance story, to be used for the post office, must be fitted up with glazed windows, with iron sash, and wooden letter boxes between the iron antæ, with openings, &c., as per detail drawing No. 9, for delivery of letters, as the superintendent may direct. **Post office fittings.**

The custom-house room must be fitted up with suitable counters, and their appendages, of mahogany, (proper for the business of the department.) The above includes suitable drawers and cupboards, under the counter; but no desks, nor fixtures upon it. The walls of the court room must be panelled to the height of six (6) feet from the level of the floor of the bar; finished at the base with a skirting, and at the top with an impost moulding, as per detail drawing. **Finish of custom-house room.**

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Finish of court room.

The court room must be fitted with its railings, 2¼ by 3¾ inches, and newels 6 inches in diameter, and of proper heights; its judge's seat, desk, &c.; its clerk, and marshal's seat, desk, &c.; its dock, witnesses' stand, spectators' seats, &c. The desks, rails, &c., must be of proper quality of mahogany. The judge's seat must be raised 3 risers of 8 inches, the clerk's one riser of 8 inches, and the jury, witness, and spectators' seats must rise three inches, at least, to each seat, as they retire from the bar.

Fly doors.

There must be constructed fly doors to the court and custom-house rooms, the frames ⅝ thick, light panels, covered with baize, hung with 4 by 4-inch butt hinges, and furnished with knobs, springs, &c., complete.

Finish of water closets.

He must construct all the wood-work, and carpenter's work of the water-closets, &c., the seats of which must be of mahogany, and the reservoirs, holding 200 gallons each, over each of the water-closets, to receive the water from the cisterns or well, for the use of the water-closets, must be made of 2 inch plank, milled, jointed, and matched, firmly and securely put together, and fully fitted to receive the lead lining put in by the plumber.

He must also construct the wood-work for the post office washing room in the cellar, and wood-work of the privies' building in the yard before mentioned.

The mahogany stair-rail will be 2¼ by 4 inches, wrought to pattern in best manner.

Centres.

Casing stone-work.

He must construct all the centres for the arches, trimmers, &c.; furnish, and put on, proper guards, and casings to the cut stone-work, to ensure it against damage while the work is going on, and be responsible for any damage, that may occur to it from neglect of such precaution; construct and put up all the necessary ventilating trunks; fully construct, and complete all the other carpenter and

Jobbing.

joiner's work on the building, and do all the jobbing, &c., required of the carpenter, and joiner, furnishing all the materials, and executing the whole work in a faithful, and workmanlike manner to the acceptance of the superintendent.

PLASTERING, STUCCO-WORK, ETC.

Ceilings. Three-coat work.

All the ceilings must be lathed, and plastered in three coats, and finished in stucco; all the brick walls must be

Two coats on the brick walls. Granite finish.

plastered with two coats, and, when required, divided off into ashlar, colored in imitation of granite, and left coarse-finished with the float in the best manner, so as to prevent defacement, and the condensation of moisture; and, also, plaster the walls and ceilings of the privies in a proper

Cornice or angle moulds,

manner, leaving the walls rough as above. All the rooms must have a moulding, in the angles at the ceiling, as represented on the drawing No. 7.

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All of the materials must be of the very best quality for the purpose, and all the work, including the necessary jobbing, must be executed in the most workmanlike manner, to the acceptance of the superintendent. Jobbing.

PAINTING AND GLAZING.

All the glazing must be done with the best quality of crystal sheet window glass, well bedded back, puttied, and left clean, and perfect on the completion of the work. Glazing.

The number of lights, sizes, &c., as indicated on the drawings.

All the exterior iron-work of the building must be painted four coats of best quality New Jersey zinc paint, sanded in two coats, except roof, and finished in imitation of granite. Exterior iron-work.

All the interior iron-work must have four coats of the above zinc paint, finished in imitation of bronze, or otherwise, as may be directed, and have two coats of varnish. Inside iron-work.

All the wood-work, except the floors and mahogany work, usually painted in such buildings, must be painted three coats pure white lead, properly toned, and pure linseed oil, and grained in oil colors in imitation of woods, or marble, as may be directed by the superintendent. Grained work.

All the graining must have two coats of best copal varnish, and the mahogany-work, coats sufficient to give it proper body, and be polished in the best manner. Varnishing.

All the floors must be oiled in the most thorough manner, and, if thought necessary, varnished with one coat. Oiling and varnishing floors.

The painter must "fresco," in the best manner, the ceilings of the vestibules of the post office, custom-house and court rooms, and the ceilings, and so much of the walls of the custom-house, and court rooms, as may be required of him. He must paint the wood-work of the privies, and glaze the windows in a proper manner. Fresco.

PLUMBER'S WORK.

The reservoirs, over the water-closets, must be lined in the most perfect manner, with best eight pound milled lead. Reservoirs.

If required, there must be, in a proper location, a forcing pump, of best kind, and construction, for supplying the water-closet cisterns, &c., with water from the cisterns or well. Force pump.

The plumber must construct (with the exception of their carpenter's work,) four (4) water-closets, mentioned in the former part of the specifications, and as shown on the plans, with all their fixtures complete, including supply, soil, and waste pipes, bowls, traps, basins, and urine sinks, with their supply and waste pipes, &c.; and also the necessary cistern bowls, basins, pipes, &c., for the post office wash room in the cellar. Water-closets.

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